



Taken for a ride

The conditions for elephants used in tourism in Asia



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Preface

We have been moving the world to protect animals for more than 50 years. Currently working in more than 50 countries and on six continents, we are a truly global organisation. Protecting the world's wildlife from exploitation and cruelty is central to our work.

The Wildlife - not entertainers campaign aims to end the suffering of hundreds of thousands of wild animals used and abused in the tourism entertainment industry. The strength of the campaign is in building a movement to protect wildlife. Travel companies and tourists are at the forefront of taking action for elephants, and other wild animals.

Moving the travel industry

In 2010 TUI Nederland became the first tour operator to stop all sales and promotion of venues offering elephant rides and shows. It was soon followed by several other operators including Intrepid Travel who, in 2013, was first to stop such sales and promotions globally. By early 2017, more than 160 travel companies had made similar commitments and now offer elephant-friendly tourism activities.

TripAdvisor announced in 2016 that it would end the sale of tickets for wildlife experiences where tourists come into direct contact with captive wild animals, including elephant riding. This decision was in response to 550,000 people taking action with us to demand that the company stop profiting from the world's cruellest wildlife attractions.

Yet these changes are only the start. There is much more to be done to save elephants and other wild animals from suffering in the name of entertainment. As always, effective partnerships will be key to our success.

Working partners for wildlife

We have a 20-year history of working with local partners to bring an end to bear dancing in Greece, Turkey and India and are at the final stage of phasing out bear baiting in Pakistan. As part of this work we develop alternative livelihoods for bear owners to ensure they no longer depend on bear dancing or baiting for an income.

Since 2005 we have worked in Asia to improve the welfare of elephants. This includes supporting elephant owners in Nepal to learn about alternative, humane methods to work with their elephants. While this had positive impact on the treatment of those elephants it did not address the main welfare concerns surrounding the use of elephants in captivity.

In 2005 and 2006 we funded research into the welfare of elephants in India. This was conducted by Compassion Unlimited Plus Action (CUPA) and Asian Nature Conservation Foundation (ANCF) and had a great impact on the recognition of elephants' welfare in India. Between 2005-2008 we also supported the elephant hospital of the Thai Elephant Conservation Center to provide medical care to working elephants.

Research, conducted by World Animal Protection and funded by The Intrepid Foundation in 2010 highlighted the plight of captive elephants in Thailand. During that year, we also launched a public campaign with TUI Nederland to make Dutch tourists aware of the hidden cruelty behind elephant rides and shows.

The research and experience gained since 2010 has greatly informed this report and the Wildlife - not entertainers campaign. In 2014, we commissioned Oxford University's Wildlife Conservation Research Unit (WildCRU) to produce an in-depth review of the global scale of the wildlife tourism industry [1]. The findings and recommendations of this report informed our campaign approach to tackle the ten cruellest wildlife tourism attractions [2].

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Executive summary

This report documents the conditions endured by nearly 3,000 elephants used in tourist venues across Asia. A total of 220 venues in Thailand, Laos, Cambodia, Nepal and Sri Lanka, and India were surveyed between late 2014 and mid-2016. These included all venues that could be identified in Thailand, Laos, Cambodia, Nepal and Sri Lanka, and a representative selection of venues in India. It follows 'Wildlife on a tightrope' - World Animal Protection's first survey in 2010 covering the conditions of elephants in entertainment in Thailand [3].

This latest research shows that of the 2,923 elephants surveyed 3 out of 4 are living in poor and unacceptable conditions. All of these are kept at venues offering elephant rides - one of the most popular tourist activities in these Asian countries.

Of the countries visited, Thailand is home to about three-quarters of all entertainment elephants assessed in this study.

There has been a 30% rise in the number of elephants at tourism venues in Thailand since 2010. In the most recent study, 357 more elephants in Thailand were found living in poor welfare conditions than five years ago.

This corresponds with a rise in the number of tourists to Thailand, and the rapidly developing elephant tourism entertainment industry which bears little resemblance to how elephants were traditionally kept. It sparks great concern about the rise in the exploitation of elephants, as well as people.

Several venues receive more than 1,000 visitors a day with elephants continually required to give rides, perform and interact with tourists. These large venues are responsible for some of the poorest welfare conditions cited in this research. Additionally, they commonly also provide poor living standards for the elephant handlers (mahouts).

Keeping most in poor conditions

More than 2,000 of the elephants surveyed were being used for saddled rides or shows. The scale of suffering at most of these venues is severe.

When not giving rides or performing, the elephants were typically chained day and night, most of the time to chains less than 3m long. They were also fed poor diets, given limited appropriate veterinary care and were frequently kept on concrete floors in stressful locations near loud music, roads or visitor groups.

These conditions take no account of the elephants' intelligence, behaviours and needs and follows the severe

trauma endured by elephants in their early years. The trauma is caused by separation from their mothers and the harsh training process to break their spirits and make them submissive enough to give rides and perform.

Providing better conditions for some

The research found a further 487 elephants across Asian tourist venues kept at venues with better conditions. Although still inadequate, these venues usually had more knowledgeable and caring staff, mostly no saddled riding, shorter working hours, and more possibilities for social interaction between elephants. In many cases they also provided better working conditions for the mahouts.

Only 194 elephants at 13 venues were found to be living in high welfare captive conditions. At these venues there were no rides or performances. The elephants walked free during most of the day, were able to socialise with other elephants and were fed on natural vegetation at most of these venues. Tourists visiting these venues could observe elephants behaving naturally. Direct interaction between visitors and elephants was usually prohibited or limited. Mahouts at these venues were commonly well respected for their responsibility and fully involved with the daily management of elephants and interaction with tourists.

Risking health and lives

Despite better conditions at some venues there are still clear safety risks involved with close contact between visitors and elephants. Between 2010 and 2016 in Thailand alone, 17 fatalities and 21 serious injuries to people by captive elephants were reported in the media. Unreported incidences involving local elephant keepers are likely to make this figure much higher.

Creating change for elephants

In Thailand, 173 more elephants are being kept at venues with significantly better welfare conditions compared to 2010. However, this is over-shadowed by the much larger increase of 357 elephants in venues with severely inadequate welfare conditions.

The situation for existing captive elephants will only improve if a shift leads to fewer elephants suffering under poor conditions and more experiencing better welfare. This study shows that this shift has not yet begun.

The growing number of elephants in a highly profit-driven industry and the increasing demand for elephant experiences also sparks conservation concerns. The high value of captive elephants and porous borders are drivers for the illegal poaching and laundering of wild-caught elephants into the captive elephant tourism industry.

The travel industry, governments, elephant owners and handlers, local communities, and individual travellers, are part of the solution. It is particularly critical that the travel industry proves the demand for higher welfare elephant venues.

We are committed to work collaboratively to end the suffering of captive elephants in tourism and that of other wild animals exploited for entertainment.

Developing an elephant-friendly travel industry

Pathways clearly need to be created to provide better care for the existing elephants, while phasing out exploitative practices.

This study documents some positive developments for elephants in Asia that could act as a guiding beacon for the positive transformation of elephant venues. To enable such wider and sustainable change to end the suffering of elephants this report makes the recommendations below.

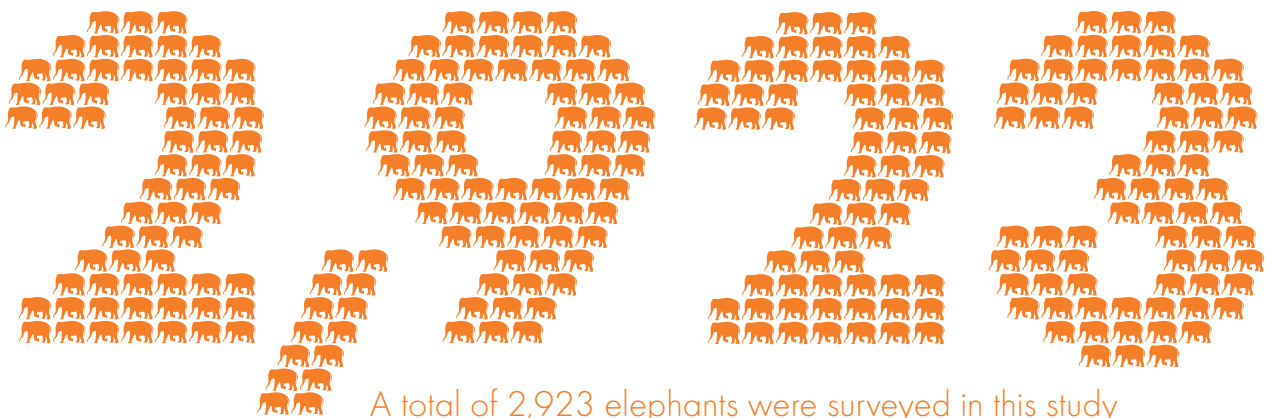
- Enable and encourage replication of high-welfare, elephant-friendly venues.
- Channel tourist demand away from the worst activities, such as elephant shows and rides, to more humane alternatives.
- Devise a set of elephant-friendly tourism standards.
- Improve conditions for captive elephants not kept in elephant-friendly venues.
- Stop elephants being poached from the wild for the tourist industry.
- Ensure a loophole-free registration process for captive elephants.
- Limit captive breeding to facilities with genuine conservation value.
- Respect local cultures and address the needs of the mahouts and other elephant-dependent people by developing alternative livelihoods with them.

Three out of four elephants surveyed are living in poor and unacceptable conditions.

Only 194 elephants at 13 venues were found to be living in high-welfare captive conditions. At these venues there were no rides or performances.

Over a period of just five years there has been a 30% rise in the number of elephants at tourism venues in Thailand.

Elephants are wildlife; not entertainers



Introduction

We define wildlife entertainment as using wild animals primarily for entertaining people, in ways that cause harm, stress or discomfort to the animals, or by displaying them in demeaning ways.

Within such situations wild animals are kept in inadequate living conditions that cause continuous suffering. They will also experience pain as part of the training methods. For example, orangutans are trained to re-enact kick-boxing matches, tiger cubs are made to pose with tourists for selfies, and elephants are forced to give rides and perform shows.

Across the world, wild animals are taken from the wild, or bred in captivity, to be used for entertainment in the tourism industry.

Wildlife tourist attractions, including wildlife entertainment, have been identified as a prime tourist motivator, are considered a highly profitable market, and as a market are predicted to grow in the coming decades [1,4]. A 2014 survey of 13,000 people, commissioned by World Animal Protection, identified the love of animals as a prime motivator for visiting such venues.

However, little accurate data is available on the global scale of the industry for specific species, the welfare conditions of the animals and the impact of this industry on the conservation status of wild populations. A study commissioned by World Animal Protection through WildCRU found that out of 24 types of wildlife tourist attractions 14 (involving 120,000–340,000 animals) had negative conservation impacts. Eighteen (involving 230,000–550,000 animals) had negative welfare impacts [1].

Despite these figures very few tourists gave negative feedback on these attractions due to conservation or welfare concerns. The study concluded that wildlife tourist attractions have substantial negative effects unrecognised by, or concealed from the vast majority of tourists. This suggests an urgent need for tourist education and regulation of wildlife tourist attractions worldwide.

Wildlife entertainment is one of the particularly worrying types of wildlife tourist attractions. Animals that are taken from the wild or bred in captivity (often removed from their mothers at a young age) are forced to endure cruel and intensive training to make them perform and interact with people for visitors' entertainment.

Global efforts are necessary to address the welfare and conservation concerns inherent in this industry and lead to a phase-out of wildlife entertainment.

Our Wildlife – not entertainers global campaign is based on the vision that wild animals belong in the wild – not in entertainment. A major component of the campaign encourages people to be animal-friendly tourists, and asks travel companies to replace sales and advertisement of wildlife entertainment with activities not involving animal suffering.

Since 2010 more than 160 travel companies have joined World Animal Protection by committing to end all sales and promotion of venues offering elephant rides and shows. Instead they offer more humane alternatives, such as visits to genuine elephant sanctuaries to support captive elephants in need, or responsible viewing of elephants in the wild.

Although the proliferation of wildlife entertainment tourism is a global trend, it is most evident in Asia, where millions of tourists flock each year. Upon arrival in Thailand, Asia's second most popular tourist destination [5], tourists are bombarded with advertising for wildlife entertainment attractions: 'Ride an elephant', 'Be a mahout for a day', 'See elephant shows', 'Take selfies cuddling tigers'.

We conducted our first study on tourist venues housing wild animals trained for entertainment across Thailand in 2010 [3]. The scale of the wildlife tourism industry and the welfare of captive wild animals was assessed at 118 venues (representing approximately 95% of all venues in Thailand at that time).

Captive animals across these venues included 1,688 elephants, 614 tigers and 317 macaques. Most venues were using elephants for elephant rides or shows. Overall, 90% of the tiger and macaque venues and 80% of the elephant venues were rated as severely inadequate for welfare conditions for the animals. Most of whom were housed there for life.

Of the elephant venues, 15% provided a slightly better but still inadequate quality of husbandry conditions than the majority. The main points of concern for these species were:

- extreme physical restraint by chaining or containing animals in small cages

- limited opportunity for social interaction with other individuals
- participation in stressful and in some cases extremely demanding show activities
- non-existent or insufficient veterinary care
- inadequate nutrition.

In 2010, we concluded that "strong concerns must be raised regarding the situation for wildlife used in entertainment venues in Thailand. Not only is the animals' welfare often severely compromised but negative impacts on the conservation of these species are likely through maintaining a demand for wild animals." [3,6]

Elephants were kept at 106 of the 118 assessed venues, making them the most highly represented species in entertainment, with elephant riding the most common tourism activity.

This report expands and updates our 2010 work. It features additional countries and updates our data from Thailand. The results represent one of the most comprehensive studies of the welfare conditions for captive elephants in the tourism industry. They will help expert stakeholders of the travel industry, governments, elephant experts and regular travellers make informed decisions to protect elephants as part of our Wildlife - not entertainers campaign.

Image: Inadequate conditions at a typical elephant riding venue in Thailand. All elephants here are chained on short chains, stand on concrete and will be used for saddled rides throughout the day.



Background information

Asian elephants: species and population

Asian elephants are considered endangered by the International Union for Conservation of Nature (IUCN). They are on Appendix I of the Convention on International Trade in Endangered Species (CITES), which heavily restricts international trade of elephants and elephant parts.

Constant human encroachment into the elephant's habitat and poaching for ivory or wild animals has been causing the Asian elephant population's rapid decline over recent decades. Estimates of the total population range between 38,000 and 52,000 elephants [7,8].

There are three commonly recognised sub-species: the Indian elephant (*Elephas maximus indicus*) on the Asian mainland; the Ceylon elephant (*E. m. maximus*) on Sri Lanka; and the Sumatran elephant (*E. m. sumatranus*) on the Indonesian island of Sumatra [9]. Populations of wild elephants vary across 13 countries (or range states).

There are estimates of fewer than 200 in each of Bangladesh, Bhutan, China, Nepal and Vietnam and fewer than 1,000 for Cambodia and Laos [7]. The population of elephants in the wild in Thailand is estimated to be between 2,500 - 3,200 [10,11]. India has the largest population of elephants in the wild with an estimated 23,900-32,000 elephants [8].

In addition to wild populations, there is a significant population of captive elephants. The captive elephant population is estimated to constitute one-quarter to one-third of all remaining Asian elephants [12,13], with this ratio likely to be increasing. In 2003, 14,500-16,000 Asian elephants were assumed to live in captive or semi-wild conditions and were typically used for logging, village work, tourism, or temple purposes [14].

Captive elephants are primarily sourced from the wild although in some countries captive breeding has been practiced with some success. Commercial gain has been identified as a prime motivator for acquiring elephants [13]. 'An assessment of the live elephant trade in Thailand', from wildlife trade monitoring network TRAFFIC, reports 79-81 wild elephants were illegally captured, between April 2011 and March 2013, for sale to the Thai tourism industry [10]. Most of the animals came from Myanmar. Here the capture of elephants is considered a serious threat to the future survival of the country's wild population of around 4,000-5,000 Asian elephants. The report concluded that: 'Wild live elephants are being illegally captured to supply the lucrative tourism industry in Thailand and urgent changes to the country's legislation and elephant registration procedures are needed to stop the trafficking.'

Biology and behaviour

With their African counterparts, Asian elephants are the largest land-based mammal alive. Adults can weigh between 3,000-5,000kg and reach a body length of more than 6m. Elephants are long lived. They can reach a lifespan of about 70 years in the wild, although their lifespan in captivity is generally considered shorter [15]. Pregnant females have a gestation period of around 20 months. After birth, they take care of their offspring for the first four to five years and continue to supervise them for several years after that.

Elephants are some of the most socially-developed mammals in the world and are capable of arranging themselves into a complex social structure. They form multi-tiered societies, based on mother - calf units, bonded joint-family units (that stay together), and clans that coordinate their behaviour [8].

Elephants can form herds of up to 20 females and juveniles - even herd sizes of more than 100 individuals have been reported [16].

Contrary to their African cousins, Asian elephants do not seem to be as hierarchically structured and may not necessarily have a matriarch leader [17]. Individuals in herds constantly display a range of social behaviours including touch and vocalisation. Cooperative behaviour including sharing the care of offspring has also been recorded in herds.

Adult males travel alone, joining a female group for periods or forming temporary male groups. Asian elephants roam home ranges of between 15-30 km², depending on availability of food, water and shelter.

Elephants can travel up to 10km daily in thick forest. They spend around 12-18 hours per day consuming between 150-300kg of food. They feed on grasses and browse on tree bark, roots, leaves and small stems (depending on availability and season).

Elephants are always close to a source of fresh water because they need to drink at least once a day. They also typically bathe and often swim in water each day. Other common activities are mud and dust bathing, rubbing on trees, and exploring their environment using their trunk [18].

Asian elephants are highly intelligent and have a substantial cognitive ability [8]. Emotions, such as 'grief' at the loss of a family members, and development of post-traumatic stress disorder in reaction to traumatic incidences have been evidenced [19-21].

Elephants have never undergone the process of 'domestication'.

The myth of the domesticated elephant

'Domesticated' is a term often used to describe elephants in captivity, to distinguish them from their wild counterparts. Tourists are exposed to this term in advertising and throughout their experiences at elephant entertainment venues through educational materials and communication with guides and mahouts. Also many native people refer to elephants as domesticated animals, arguing the case due to the long history of keeping elephants in captivity. The term is even commonly used in scientific literature, a platform relied upon for accuracy, as well as in less formal publications. Such use further reinforces this commonly held misconception.

Elephants have never undergone the process of 'domestication', a socio-biological process. Although discussions are ongoing regarding how to define domestication exactly, most animal experts state that domestication can only take place through human-guided, selective breeding for an estimated no fewer than a dozen generations [22–24]. In each generation, the offspring carrying the desired traits (eg strength, fur, size, behaviour) are selected for further breeding.

The term domesticated always refers to a whole population; by definition an individual animal can never be domesticated in its lifespan. A domesticated species is significantly different from its wild cousin in its instincts and anatomy, while emphasising traits that are felt desirable by humans. While domesticated animals still often display a range of natural behaviours, they differ in the intensity of stimuli required to trigger a certain behaviour change. Consequently, they have become easier to handle than their wild counterparts.

Throughout the 3,000-year history of human–elephant relationships, most elephants used by people have been captured from the wild. This means the long history of humans using elephants does not validate the labelling of elephants as domesticated. Even today, most adult elephants originate from the wild, while some are first or second generation captive-bred, through non-selective breeding. Yet, selective breeding is a prerequisite in the biological process of domestication. Thus, most captive Asian elephants used for tourist rides today will still have been captured directly from the wild. Although the exact number is difficult to validate with only incomplete databases available to verify the origin [25]. Various authors define the case of captive elephants as a classical example of animal taming and training, not domestication [26].

While elephants are not domesticated, their time in captivity and the close interaction with their human keeper imprints on the behaviour of individuals. Some authors suggest introducing additional terminology between the outliers of 'domesticated' and 'wild', such as 'tamed' or 'captive wild animals' [22]. 'Tamed' is commonly felt to be vague and potentially misleading considering the persisting dangerousness of the animals. Yet, the word 'captive' may imply that the animal has been captured from the wild directly, which is not the case for elephants born in captivity [27].

Acknowledging these discussions and lacking a better alternative, it is still felt that the term 'captive wild animals' most closely reflects elephants in entertainment. This label also allows for stricter regulations of the use of these animals, recognising that their complex needs are identical to their truly wild relatives.

Image: Wild elephant herd grazing in a national park in Sri Lanka



Tourist perceptions of captive elephants

The term domesticated is not only inaccurate, it is also a common misconception that can hinder conservation work, and efforts to ensure better welfare of captive elephants. If these animals are described as domesticated not wild, visitors are more likely to accept their chaining for long periods, their confinement to small spaces, and their close contact with handlers and trainers.

This is because the term 'domesticated' implies that the animal has lost its wild instincts and, like cats, dogs and horses, has adapted successfully to a life of human companionship. For elephants, nothing could be further from the truth. The usual visitor experience of elephants in tourism paints a skewed picture of a captive elephant's life.

Messaging communicated by tour guides and mahouts also does not usually reveal the realities of the elephant's life in captivity; it often paints an inaccurate and often romanticised picture. This reinforces the perception of elephants as well-cared-for pets, adding to the enjoyment for the visitor and further fuelling support for this industry.

The few minutes a tourist spends with an elephant during a ride do not reveal the true life of the elephant or what it has endured previously regarding contact with tourists and giving rides. For example, shows offering elephant painting may seem harmless. But getting an elephant to paint requires extremely intensive training to get the animal to obey the mahout during the performance.

While it is easy to understand that elephant painting or playing football is not a natural activity for elephants, the venues rely on the 'cute', exotic and novel factors of these activities. Although the brief interaction of riding allows the tourist to appreciate the elephant's bulk and beauty it disguises the daily boredom, physical hardship and relentlessness of tourist treks. It also hides the confinement endured at other times.

It can be difficult for an untrained person to identify signs of distress or discomfort in elephants. Apart from the typical stereotypical swaying, distressed elephants do not always display distress that clearly. Elephant body language can be difficult to interpret and is not comparable with the body language of domesticated animals we are familiar with.



Image left: An elephant at his shelter after giving rides in India. Tied up at 3 legs on stone in a dark shed, this is usually not visible to the tourists that take an elephant ride here. **Image top right:** Tools used by mahouts to control and guide elephants in Nepal. **Image bottom right:** A mahout washing his young bull elephant in Thailand.

Training and handling of elephants

Visitors often see elephants as docile and harmless animals, despite being recognised by elephant keepers and mahouts as one of the most dangerous animals to handle. The wild nature of captive elephants requires great efforts from elephant keepers to handle and control elephants. Sometimes their own lives are at risk.

A wild elephant would never let a human ride on its back, nor submit to performing unnatural behaviours in shows. The process of people gaining control over the elephant starts early on in their life in captivity. It is often referred to as 'breaking-in', 'crush' or 'phajaan'. All wild caught and captive bred elephants undergo such cruel training in their early years for use in riding and shows, and also for use in situations where visitors may closely interact with the animals. This training process has been handed down from generation to generation and remains an extremely cruel process.

There are slight regional variations of this breaking-in process but essentially they are all based on the principle of establishing dominance over the elephant. Typically the calf is separated from its mother at an early age. In the case of an elephant taken from the wild, anecdotal reports indicate that the protective families of the calf may be killed in the process [10]. It will then be restrained by chains or ropes and prevented from moving unless commanded to by the trainer or mahout. Often it does not have the space to sit down. Next the elephant is forced to accept a person riding on its neck and to react to given signals. In many cases, severe pain is inflicted to speed up the process, including stabbing with hooks or other tools to establish dominance over the elephant. Well-known footage of this procedure being inflicted on newly captured elephants, shows severe abuse and extreme stress and pain for the animal.

Elephant managers in Thailand have disputed these reports, claiming that these methods are not common practice and outlawed. Even if these particularly disturbing incidents are rare exceptions, any breaking-in process remains an intensely stressful event for wild-caught and captive-born animals. Depending on the experience of the handlers involved and the personality of the individual elephant it can take from a few days to more than a week before the elephant is 'broken'. This trauma, although a relatively short time in the lifespan of the elephant, leaves deep scars and has a significant negative impact on an elephant's physical and psychological welfare.

Recent research has linked the process of 'breaking in' (as well as other traumatic events, such as the capture from the wild and separation from the mother) to the development of Post-Traumatic Stress Disorder (PTSD) in African and Asian elephants. This is, similar to that developed by people develop after traumatic situations [19,20]. Symptoms associated with such severe trauma include stereotypic behaviours, self-mutilation, severe anxiety, infanticide and inter and intra species violence. In a recent study published in 2016, 74% of examined captive Asian elephants showed symptoms of PTSD [21].

All wild-caught and captive-bred elephants undergo cruel training in early years if they are to be used for activities such as riding and shows.

In many cases, severe pain is inflicted to speed up the process, including stabbing with hooks or other tools to establish dominance over the elephant.

Recent research has linked the process of 'breaking in' (as well as other traumatic events, such as the capture from the wild and separation from the mother) to the development of post traumatic stress disorder.

After the initial 'breaking-in' training, elephants experience confinement and restricted movement throughout their captive lives. Traditionally, captive elephants are cared for by mahouts. Over centuries mahouts have gathered and passed on vast knowledge about elephant keeping.

In many cases, the mahout-elephant relationship can be very close, due to the mutual dependency on each other. Mahouts would take reasonably good care of their animals to protect their livelihood and often also out of genuine compassion for their elephant [28]. Many older and traditional mahouts can be very gentle and genuinely respect their elephant as a living being and not only as a commodity. However, in recent times, commercial exploitation has taken its toll on the mahout-elephant relationship.

The 1990s appears to have led to an increasing number of younger generations of elephant handlers without traditional mahout ancestry and primarily attracted by employment. They are often uninformed about an elephant's needs and tend to employ cruelty as a measure of discipline more frequently than an experienced mahout would have in the past. Employing handlers with no connection to the mahout tradition also leads to a highturnover of mahouts, which contributes to the stress-level of the elephant due to repeatedly adjusting to a new person's character.

Adding to the difficulties of the mahout-elephant relationship are the often unacceptable living conditions and low wages for the mahouts in many of the elephant camps.

To reduce the risks of injury to people and property, elephants need to be kept under extreme restraint when not being used. This has a significant negative impact their welfare. Elephants are highly social animals with complex hierarchies within herds. However, in captivity, elephants are forced to submit to their human handlers at all times. In a typical elephant camp, mahouts continually express their dominance over the elephant - sometimes by inflicting direct pain, such as by using bull hooks inappropriately and through constant restraint. The elephant has no choice but to submit to the mahout's commands, relying completely on the mahout's ability to recognise its essential needs and signs of distress.

Mahouts, particularly those with little experience, often reject the idea of giving their elephant more freedom. This is largely due to fear of loss of control of their animal once it experiences the freedom of choice and independency, and fears for their personal safety. Most mahouts don't practice these procedures out of ill-will or disrespect to the elephant, but the elephant camp environment leaves them with little choice to ensure their own safety and that of visitors.

Alternative training methods

In the last 10 years, some efforts by various groups have been made to replace the cruel training methods with alternatives. These include positive-reinforcement training or a combination of limited aversive training with positive-reinforcement [29]. Such methods are commonly and successfully used in zoos and wildlife facilities to train animals to cooperate in basic procedures, such as medical examinations. There, the trainer will usually work with the animal through a protective wall or fence. This ensures animal and human safety if the animal decides not to cooperate.

While in principle introducing these methods to elephants must be seen as a positive step, it all depends on how and why they are applied. Positive reinforcement training has been developed in protected contact environments. These are captive environments where the animals and the keepers are always protected by a safety barrier from each other. The training aims to provide improvements to the daily management and care of wild animals in zoos and sanctuaries. This could be for example when moving animals between enclosures or for medical procedures. In these cases positive reinforcement training is often an essential and very beneficial tool when managing captive elephants. Such training always relies on the voluntary cooperation of the elephant. It can also help ensure the best possible welfare for the elephant while keeping staff safe [30-32].



Image: Extremely short chains to restrain an elephant at a tourism venue in Thailand

However, applying these methods to replace the conventional 'breaking-in' training for the purpose of using elephants for activities such as close visitor contact, elephant rides and shows is highly questionable.

Relying on an elephant's cooperative will to ensure the safety of handlers and visitors during stressful, demanding situations, such as rides and shows, or any other situation leaving people unprotected, is a serious risk to human safety. Using elephants that have been trained purely cooperatively may leave their handlers powerless in emergency situations. Fatigue, stress and chronic deprivation of freedom lead to unpredictable and hard to control elephants. This can result in serious injuries to people and damage to property.

Such training also requires a high level of skill from trainers and mahouts. This is challenging where there is a high-turnover of unskilled mahouts, especially in Thailand.

There are also concerns that even if an elephant owner agrees to use a softer training method, a conventional cruel training may be added once the softer training is completed. There is a risk that elephant venues may falsely claim to use humane methods when training and using elephants for shows, rides, or other direct contact with visitors, while still practicing traditional, cruel methods.

At venues allowing direct contact between elephants and people, positive reinforcement training can enhance the elephant's life to some degree, but cruel methods will still be required to control them in stressful situations to ensure protection of handlers, visitors and property. At sanctuaries and facilities that can manage elephants without direct contact and qualified staff, positive reinforcement training is essential and could replace cruel training entirely.

To reduce the risks of injury to humans and property, the elephants need to be kept under extreme restraint when not being used - a testament to the unsuitability of entertainment venues

Image: Elephant in a shelter that is used for positive reinforcement training.



Captive elephants and the risks for people

Regardless of the efforts to control elephants through training and restraints, anecdotal sources suggest that for every male elephant in captivity, one human fatality will occur. It is unclear how many people each year are actually killed or severely injured by captive elephants, but it is certainly higher than with any other captive wild animal used by humans.

Examples of tourists being killed or severely injured by elephants include:

- a Scottish tourist killed by an elephant in front of his daughter in 2016 [33]
- a Swiss woman who was trampled to death in 2011 (with four other tourists injured) [34]
- a three-year-old child attacked by an elephant in a market 2009 [35]
- a woman suffering spinal injuries from a street-begging elephant (in 2008) [36]
- a UK resident girl killed by a male elephant during an elephant show in 2000 [37].

Between 2010 and 2016, 17 fatalities and 21 serious injuries caused by captive elephants in Thailand alone have been reported by media. Victims were international tourists, local bystanders, or mahouts. Mahouts clearly bear the highest risk and so are the most frequent victims. The number of unreported incidents is high as there is often no publicity if foreign tourists are not involved.

17 fatalities and 21 serious injuries caused by captive elephants in Thailand have been reported by media.

Predominantly, male elephants are involved in these incidences. During their 'musth' period, a natural and periodic phase of increased testosterone production, an elephant bull can become unpredictable and often extremely aggressive. Even the most progressive elephant institutions struggle with the management of elephants in musth and chain them in isolation for the duration. This can be anything from a week in younger animals to up to two months in older elephants [38].

Elephants that turn aggressive and uncontrollable or start expressing severe stereotypic behaviour due to their captive environment are usually removed from the camps by either trading them off to other places or isolating them spatially. The Thai Elephant Conservation Center has established specialised teams that are experienced in dealing with critically aggressive animals. If an elephant, usually a musth-bull, escapes its chains and injures or kills people, a team rushes to the site to control the situation. The animal is sedated by remote injection and relocated if necessary. The natural, musth-related behaviour of elephant bulls further reinforces their unsuitability for captive environments, especially when in direct contact with people.

There are also public health concerns for people in close contact with elephants. Tuberculosis in elephants has been well recognised for centuries [39]. It is a less obvious but serious risk to the health of both the elephants and their keepers. It is a chronic disease documented in captive Asian elephants worldwide including Thailand [40], Nepal [41] and in zoos in the US [42]. In Nepal, tuberculosis in captive elephants was first identified in 2002. During 2002-2009 seven captive elephants died from the disease, and in 2011 25% (11 out of 44) elephants tested positive for tuberculosis [41].

Tuberculosis has long been recognised as an emerging zoonotic disease, with two-way transmission of the disease between humans and elephants evidenced in 1998 [43]. Consequently, close contact between tuberculosis-carrying elephants and humans within confined workplaces poses a serious infection risk. Molecular studies on four elephants with tuberculosis in Thailand indicated that the disease was most probably transmitted from humans [40].

Active and latent tuberculosis has also been reported in 20% of captive elephants in Malaysia and 24% of their mahouts with indication of two-way transmission of the disease [44]. It has been suggested that conditions for captive elephants in the tourism industry are a contributing factor to the increase in cases of tuberculosis [45]. These conditions include poor nutrition and overwork leading to a compromised immune system.

This information raises serious questions about the public health risk of elephant attractions that allow close contact between tourists and elephants. Activities such as trunk kisses or giving tourists trunk showers may facilitate a disease transmission. It is crucial for future studies to assess this risk and its impact on the health of tourists. It is also crucial that the risk of transmission of tuberculosis to elephants from people carrying the disease be assessed too.

The welfare of captive elephants

Animal management procedures and husbandry conditions have a detrimental effect on elephant welfare throughout their captive lives. Captive management has long been focused on the interests of the owner or venue not on the psychological or physiological needs of elephants [13]. This leaves the animals vulnerable to abuse and deprivation, as illustrated by the training and management methods already outlined. Ensuring high standards of welfare for elephants in captivity has many challenges. Their size, complex social life, high intelligence, large home ranges, diverse diet, and large behavioural repertoire make meeting their social and environmental needs in captivity difficult [45].

Captive conditions for elephants in entertainment vary greatly regarding the enclosures/holding facilities, nature and the extent of restraint used – amount of movement permitted and number of hours chained. Conditions for their diet, foraging opportunities, access to water for bathing and drinking, and social groupings are diverse too.



Image: Husbandry conditions for a bull elephant at a tourism venue in India.

There is widespread evidence that paints a clear picture of extremely poor welfare of elephants in captivity. Studies highlight shorter lifespans, behaviour problems, development of chronic diseases and limited reproductive success as indicators of impaired physical and psychological welfare. The quality of social groupings of these highly social animals has a tremendous impact on their welfare – elephants housed together are much more likely to be healthy [46]. Using elephants for entertainment sparks severe welfare concerns. These include: the breaking of social bonds; training procedures; severe confinement through chains or small pens; close contact with tourists; physical burden of giving rides, and performing harmful activities in shows.

A 2007 study of 194 elephants from 18 tourist venues in Thailand found that 64% of elephants had injuries on their backs, suggesting that the then common practices of elephant riding led to harm [47]. But care must be taken not to reduce elephant riding welfare concerns to a single factor, such as the saddles. The elephants' welfare is in principle compromised by the wider husbandry conditions and management practices [28]. Several studies have highlighted the problematic overall situation for elephants in the entertainment industry.

In 2010, World Animal Protection's study of wildlife in entertainment in Thailand [3] collected data on several categories. These included: mobility/restraining methods; environmental characteristics (shelter, hygiene); social groupings; diet; animal management; intensity of involvement in entertainment activities; unnatural and stereotypic behaviours, and health of the animals. Using this data, venues were given a welfare rating out of 10, where 10 represented the best welfare situation. Of 1,688 individual elephants in 106 venues, 50% of venues (974 elephants) scored 4 or lower (representing severely inadequate welfare standards).

Evidence included: being restrained on short chains throughout the day and through the night (except when used for rides or performing in a show); inadequate shelters and concrete floors or holding areas; permanent saddling; poor diet; and very limited social opportunities. The study found 20 venues offered circus-like elephant shows where elephants were forced to display such unnatural behaviours as football shooting, head stands, tricycle riding and tight-rope walking.

Forty-three venues studied received a medium rating of 5–7. This was still 'inadequate' but offered the elephants some freedom of movement, some limited social interaction, and greater feeding opportunities during rest.

Only 75 elephants were found in commendable (ie semi-wild) conditions. Not surprisingly it was found that the frequency of stereotypical behaviours decreased with an increase in the welfare conditions at the assessed venues [6].

Other studies have also revealed poor welfare conditions for captive elephants. In a study of wildlife tourist attractions globally, elephant parks and treks scored poorly on both the conservation and welfare scores. Animal welfare was estimated for various wildlife attractions according to the fulfilment of the widely-recognised Five Freedoms, with elephant venues fulfilling anywhere from 1–4 of these [1,48].

One of the most comprehensive studies on captive elephant welfare was conducted in India between 2005 and 2014 by Asian Nature Conservation Foundation and Compassion Unlimited Plus Action [13]. The study involved 1,545 elephants from different management regimes (ie temples, privately-owned, zoos, forest camps) across 12 states. Chaining was common in all states with 50–90% of animals chained for 9–18 hours per day. Stereotypic behaviour was observed in 40% of privately owned elephants (which are often the ones used for rides and shows).

All states had elephants with health problems. These ranged from 17–124 incidents per state. Issues for privately owned animals included: wounds; eye, foot and leg problems; abscesses; anaemia, gastro-intestinal issues, urinary and respiratory problems; and worms.

A 2014 report by Animal Nepal [46], looked at the welfare of 42 privately-owned captive elephants in Sauraha, Chitwan National Park. The survey found that conditions were poor, with 82% of captive environments rated as 'unsuitable conditions', and no elephant environments scoring 'excellent conditions'. Of further concern: four elephants were blind, 10 had wounds, and some were forced to work too young. Others were too old to work. Some riding elephants were more than 60 years old. Elephant owners also displayed a lack of knowledge of basic elephant welfare standards during interviews.

All these studies provided various recommendations to the governments, the elephant venues and the tourism industry, including:

- implementing better welfare and management standards
- better elephant registration systems and enforcement of these
- preventing the laundering of wild elephants into the captive elephant population
- encouraging humane tourism activities that avoid using elephants for rides, shows or direct contact
- enabling better veterinary care for elephants
- replacing negative control with positive reinforcement
- increasing opportunities for social interactions or elephants
- improving conditions for and training of mahouts
- facilitating a gradual phase-out of the use of elephants for tourism while improving conditions for the existing captive elephants.

This raises the question whether elephants can be kept adequately in captivity at all. Within the zoo community it is increasingly recognised that elephants' needs can only be met by a few high-profile institutions with funding and capacity to create adequate large-scale enclosures. Most major zoo associations recommend phasing out smaller elephant venues in favour of creating fewer, but larger captive herds, allowing for more freedom and social interaction. Most animal experts agree that elephants cannot and should not be kept in captivity without very good reason.

Unfortunately, for most captive elephants a release back to the wild is not feasible. Thus, the welfare conditions of existing captive elephants must be improved in conjunction with the phase-out of the cruel elephant entertainment practice.

Conservation value and captive breeding

Claims are often made that captive elephants serve a conservation purpose by maintaining a captive population for when elephants in the wild become extinct. This argument is made especially in countries like Thailand

where the captive population is supplemented heavily through captive breeding. Thailand also plays the largest role in captive elephant tourism, as this study found (see findings page 30). Yet the commercialised character of the Thai elephant tourism industry raises concerns regarding the validity of this conservation claim.

To investigate this claim it will be useful to explore discussions on the conservation value of captive breeding of wild animal species for commercial purposes – also referred to as 'wildlife farming' –, where similar claims of conservation benefits are often made. The captive elephant situation in Thailand resembles examples of unsustainable practices of wildlife farming of endangered animals, such as tigers or some exotic pet species: Such examples involve captive breeding of a non-domesticated sub-population of an endangered species to supply the demand for a high-value product. However, the existence of this legal, high-value captive population risks opening up a market for wild animals by incentivising the laundering of wild animals into the legal captive population.

There are only very few examples of using an endangered animal in a highly-commercialised industry that have led to a better protection or conservation of the species in the wild. Rather the odds suggest this practice is adding to the species' decline in the wild. Disregarding the ethical concerns of wildlife farming and the negative welfare implications, it has been argued that to serve a conservation purpose an industry farming wild animals needs to meet the following set of criteria [49,50]:

1. legal products will form an adequate substitute for the illegal product
2. demand is met and does not increase
3. legal products will be more cost-efficient
4. no re-stocking from the wild
5. laundering is absent.

If any of these criteria are not met, the industry cannot be considered as having a conservation value. This is because the risks of sustaining demand for wild poaching or for perpetuating demand pose a threat to the animals in the wild. While possibly controversial to define the captive elephant tourism situation in Thailand as wildlife farming, the above criteria can be used to investigate the conservation value of the industry:

1. In theory, captive elephants may indeed form a substitute for wild-caught elephants, due to being earlier accustomed to people and so able to be tamed and trained earlier with with less efforts, albeit still cruelly. Disregarding persisting animal welfare concerns for now, criteria 1 is met.

2. Tourism in Thailand has been continuously increasing. In just five years, from 2010 to 2015, the tourism numbers have roughly doubled. A 2014 World Animal Protection survey of 1,700 tourists to Thailand concluded that 36% of interviewed tourists had already been on, or planned to do an elephant ride. With growing tourism numbers, the demand for rides is increasing as well, perpetuated



Image: Orphaned wild elephant calves to be rehabilitated for release back into the wild in Sri Lanka

by promoting rides as an essential attraction when visiting Thailand. Criteria 2 is not met.

3. Raising an elephant in captivity and arranging the breeding of elephants including their transport is costly and would need to be compared to the costs of capturing a wild elephant and transporting it across the border. Without accurate figures on these aspects it is not clear whether Criteria 3 is being met or not.

4. Wild elephants have been used to re-stock the captive population, although in recent years it is unclear to what extent. Criteria 4 is most likely not met, pending further data.

5. Laundering of elephants has been documented and evidenced [10]. Very commendable efforts are being made to make this more difficult in the future through improved registration systems and DNA sampling. However, there is unfortunately no bullet-proof system due to the ultimate dependency on people to implement those systems. Criteria 5 is not met.

This analysis suggests that only one criteria is met, and up to four are not. This suggests **profit-driven elephant tourism industry may be contributing to the decline of wild populations instead of protecting them.** A close evaluation of the conservation claims of the captive elephant tourism industry in Thailand is urgently needed.

To argue that the existing captive elephant population within the commercial elephant venues will serve as a species reservoir once wild elephants go extinct is a questionable argument. The above points highlight there are severe risks of a commercial elephant tourism industry contributing to a decline in wild elephants. This is in addition to the severe welfare concerns that exist. Only a minority of projects linked

with captive elephants directly contribute to wild elephant conservation, eg by reintroducing elephants back into the wild.

It is important to emphasise that there are many other conservation methods that do not involve commercial captive breeding that may be more effective in addressing the root causes of the threat to wild elephants, rather than just the symptoms. These concerns need to be considered when evaluating captive breeding efforts of elephants. A commercialised industry not adhering to scientific management of their breeding stock or replenishing wild elephants through reintroduction is highly concerning.

As the next chapter outlines, the captive elephant population in Thailand has consistently increased since the logging ban in 1989 (page 40). This has led to increasing competition for resources to care for these elephants and subsequently greater animal welfare concerns.

World Animal Protection recommends that venues which follow highest welfare standards in their management of elephants should prevent breeding to preserve resources for already existing elephants in need. This is unless the venues participate in validated conservation programmes leading to the reintroduction of captive offspring into the wild.

Progressive venues finding it hard to implement such policies may consider a compromise. They could ensure that all elephant offspring will stay at the venue for the duration of their lives, benefitting from the vicinity of the family group. However, such venues should also implement measures allowing bull elephant offspring to be kept in an environment that ensures the safety of staff and visitors, but does not rely on harmful, aversive training.

What makes an elephant-friendly venue?

All stakeholders must share a common understanding of good practices in elephant management. World Animal Protection has created guidelines – <http://www.world-animalprotection.org/elephant-friendly-venue-guidelines> – outlining criteria for elephant-friendly venues to improve the welfare of existing captive elephants and to contribute towards a phase-out of elephant exploitation [51].

This report has found a handful of venues across Asia striving to provide excellent welfare for their elephants and meeting the guidelines at least partially. One key aspect of these venues is that they have moved away from too much interaction between visitors and elephants. The riding or washing experiences are replaced by an observational experience of elephants being elephants.

By being able to observe elephants being just elephants, visitors are also more likely to understand that these complex and magnificent animals are not made for captivity. These venues may offer such observation of captive elephants either in enclosures with semi-natural habitats, or by following a group of captive elephants on foot and from a safe distance through natural habitat.

Of crucial importance is that the elephants are not forced to participate in any activity and are given the chance to express natural behaviour. In most cases, well-trained mahouts are required to supervise the elephants at all times to ensure the safety of the visitors and the elephants.

Recently, many of the most progressive venues have started constructing pens or fenced enclosures where elephants can be kept safely at night, and can move and express natural behaviours. Some remote venues using actual forests do not feature any enclosures at all. Instead they choose evening resting spots that allow the elephants to forage throughout the night in the natural habitat. However, this does at times require the elephants to be chained on long chains. Clearly this is not ideal, but it is a compromise that these venues chose to make. It enables them to provide their elephants with an environment as close as possible to their natural habitat.

World Animal Protection's guidelines recommend no direct interaction between visitors and elephants. They also include several points that ensure the venues are not sustaining the demand for more captive elephants. These sustainability



criteria are complex and often very challenging to meet. Especially if the country's legislation sees captive elephants as livestock and if high profit margins can be generated by elephants in conventional entertainment venues.

Two of these important sustainability criteria are that elephants are not bred in captivity and that they are acquired in a way that does not lead to replacing this elephant with a new elephant by the former owners. Commonly, venues will either buy or rent their elephants – both approaches have their advantages and disadvantages.

Renting elephants ensures that no large sum of money is exchanged that could be used by an elephant owner to buy a new elephant. However, elephant owners can and will remove their elephants from a venue if they feel there are benefits in using their animals elsewhere. A venue has significantly less control about how to manage a rented elephant and, for example, prevent it from breeding.

Conversely, buying elephants ensures that the venue has permanent ownership and allows it to manage the elephant according to its policies. These could include no night

chaining and breeding prevention. However, there is a serious risk that the money exchanged for one elephant will often allow the former owner to acquire a new one and so the circle continues.

Breaking this circle is complicated and would require assurances from elephant owners to not invest in new elephants. This is challenging given the high and increasing value of elephants. To encourage a transition away from private elephant ownership, ways to gradually decrease the value of elephants need to be explored. Government policies regarding ownership of elephants also need much tighter regulation.

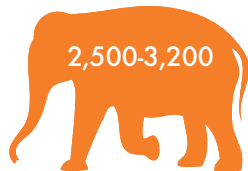
Image: Elephant free-ranging under mahout supervision at a venue in North Thailand.



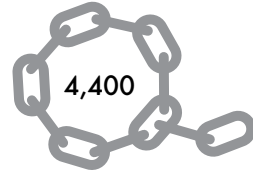
History and status of elephants in countries studied

Thailand

Wild elephants



Captive elephants



Elephant use in Thailand dates back almost 3,000 years, having been used as war and working animals. Today the elephant is one of Thailand's national symbols. Originally, wild elephants were found throughout the country and they fuelled a captive elephant population of an estimated 50,000 elephants at the beginning of the 20th century [27]. Through destruction and fragmentation of natural habitat, poaching and human-elephant conflict situations, the wild elephant population has decreased to about 2,500-3,200 elephants today [11].

Several projects in Thailand try to address threats to the wild population, eg through mitigating human-wildlife conflict [52,53].

Until 1989, captive elephants in Thailand were mostly used in the logging industry throughout the country. However, a state-wide ban on commercial forestry left many elephant owners without income and forced them into new employment fields. Trekking camps, circus shows and street begging became the new primary employment of elephants.

The tourism industry was considered a good alternative that would allow better care for those former logging elephants, as elephant rides were considered easier than the incredibly hard work in logging camps. Today, almost 30 years after the logging ban, most former logging elephants are old or have died. The profit through tourism has become the primary motivator for maintaining the current and increasing captive population of elephants.

Legal protection for live elephants in Thailand is complicated. Elephants are covered by wildlife protection legislation and domestic livestock legislation. Elephants in the wild are well protected by the wildlife protection law. Elephants taken from the wild and kept in captivity as registered elephants or bred in captivity, are governed by a combination of 18 different laws implemented by several ministries.

Until recently, captive elephants were required to be registered with the ministry of interior by eight years of age. This allowed for reported incidences of young wild elephants being poached in Myanmar and illegally traded into Thailand to supply the tourism industry where they would be registered as captive-bred. This sparked serious conservation concerns [10]. In addition, not all private owners are transparent about the true numbers of elephants that they have in their facilities. This registration system was improved in 2016, requiring elephants to be registered, microchipped and DNA-sampled at an earlier age. A final decision on the exact age is still pending from the government.

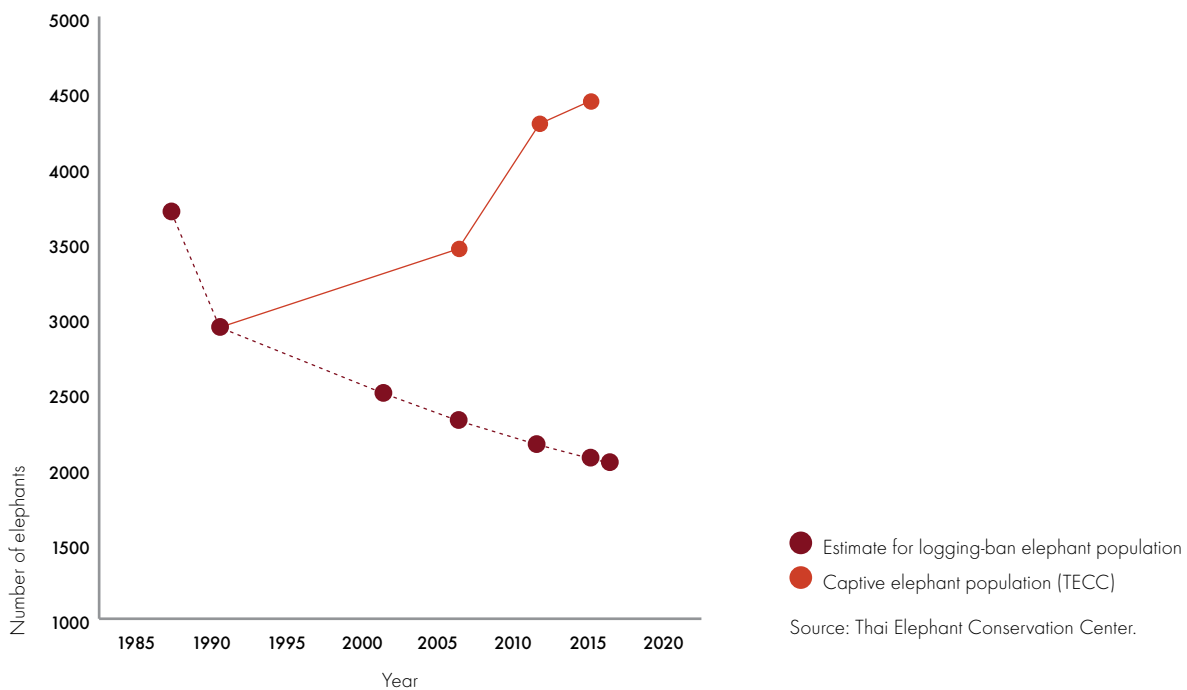
The most comprehensive database maintaining records of registered captive elephants is kept by the Thai Elephant Conservation Centre. Concerns have been frequently expressed about the accuracy of the government databases. If these concerns are valid it may lead to inadequate monitoring of the captive elephant population, enabling the further laundering of wild elephants into the system. Monitoring of the porous borders for poached wild elephants is a serious challenge for the enforcement authorities and the existence of a dual law system for captive and for wild elephants allows opportunities to launder and exploit elephants.

Irrespective of these concerns, the available data shows a steady increase in numbers of captive elephants in Thailand over the past 20 years. In the second half of the 20th century, the population of captive elephants in Thailand decreased steadily to 3,705 in 1989 and further to 2,938 in 1991, two years after the logging ban [54,55]. In 2002, it was estimated that about 2,500 elephants were in captivity in Thailand, 969 of them used in tourism [56].

However, by 2007 the captive elephant population seemed to increase again to about 3,456 elephants [57], then further to 4,287 in 2012, with roughly 50% registered in elephant camps [58]. The elephant database by the National Institute of Elephant Research and Health Service listed 4,435 elephant records in 2014 - a 50% increase on 1991. This is more than double the estimated number of remaining logging-ban elephants [59].

While most elephant industry stakeholders in Thailand are celebrating the increase as a success, the high number of captive elephants raises concerns regarding the implications for animal welfare. Improving the generally poor conditions

Figure 1: Development of the captive elephant population in Thailand.



for captive elephants is made more difficult by a steadily growing captive population. This is due to the lack of space and resources, and the profit-oriented management of those elephants. The increasing population demonstrates that today it's not anymore about providing a livelihood for the decreasing number of former logging elephants and their owners (Figure 1). Rather, captive elephant numbers are increasing to meet the strong demand for elephant entertainment from a booming tourism industry.

Thailand's tourism industry has been increasing at a rapid pace over the past decade. Since our first study in 2010 on wildlife entertainment in Thailand, tourism numbers have doubled from 15.9 million to 32.6 million in 2016 (Figure 2) [60]. In 2014 and 2016, World Animal Protection commissioned surveys among tourists of the top 10 nationalities travelling to Thailand to gauge the demand for elephant rides. For each survey between 1,700 and 2,200 tourists were interviewed in tourism hotspots to better understand their attitudes and perceptions relating to wildlife tourism activities.

In 2014, 36% of tourists stated that they had been on or planned to do an elephant ride; this translates to 8.9 million tourists having potentially sought out elephant rides in 2014. In 2016 World Animal Protection repeated the survey. We found that 40% of tourists of the top 10 nationalities visiting Thailand stated that they had been on or were planning to do an elephant ride. This suggests a demand of up to 12.8 million elephant rides in Thailand.

In October 2016 TripAdvisor, the largest travel site in the world, announced it would end all ticket sales of tourist experiences where travellers come into direct contact with captive wild animals, including elephant riding. More than half a million people worldwide joined World Animal Protection in demanding TripAdvisor stop profiting from the world's cruellest wildlife attractions. This is proof of how people can convince companies to take meaningful decisions that impact the lives of millions of animals.

These figures show a strong increase in demand over just two years. While these are worrying figures a shift is beginning in the tourism industry. A growing number of global travel companies are changing their excursion offers away from elephant riding and show facilities. The impact of these decisions may not be reflected in the survey figures which more likely represent attitudes of individually travelling visitors. Through World Animal Protection's work more than 160 travel companies have committed to not sell or promote venues that offer elephant rides and shows and instead offer more humane alternatives [61].

Thailand's captive elephants also play an indirect role in the international illegal ivory trade. While encouragingly, Thailand introduced regulations for their ivory market by requesting traders register their stocks, and prohibiting the sale of African ivory, there are still concerns around the domestic market providing opportunities for ivory laundering.

It has only recently become possible to distinguish African from Asian elephant ivory through DNA identification. However, ivory from captive Asian elephants is indistinguishable from illegally poached ivory of wild Asian elephants. This leads to grave concerns of laundering wild ivory through the Thai domestic ivory market [62].

Thailand has, in the past, been identified as probably the biggest market for ivory in South East Asia, including illegally imported ivory [63]. This legal loophole of the domestic ivory market in Thailand is causing serious international concern. The Thai government initiated a stronger regulation of the domestic ivory market, requiring domestic ivory traders to register their stock and business with the government [64,65].

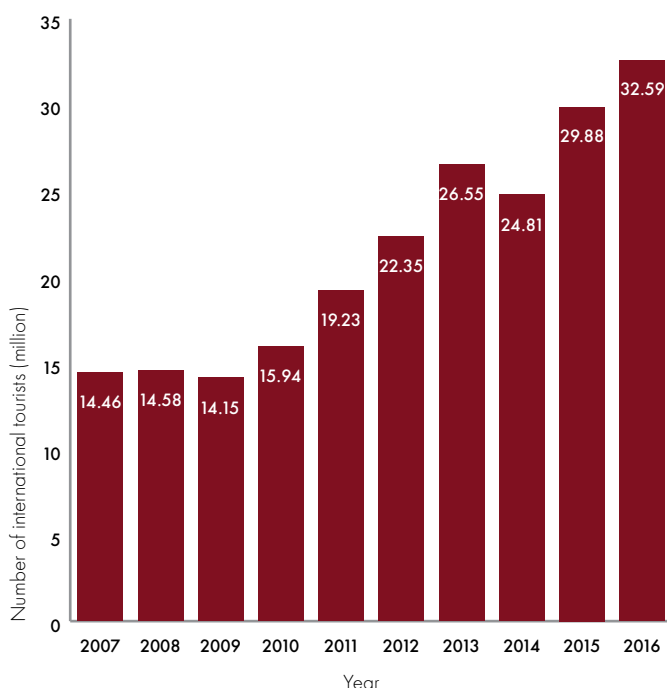
Not only does the legal domestic ivory market offer opportunities to launder illegal ivory, but it also leads to further increasing the value of captive elephants. In 2011, three elephants that were bought by a temple and died were butchered to sell the ivory, meat and skulls, causing great concern for the economic exploitation of elephants [66].

Between 1998 and 2013 the price of a captive elephant in Thailand increased three-fold to more than US\$30,000 [10]. Such a price-tag on an endangered animal as a legal commodity clearly incentivises poaching of wild animals. Elephants are at risk of being laundered into the industry, or bred in captivity for profit purposes. It is a situation that is clearly not sustainable from either a welfare or a conservation perspective.

On a positive note, Thailand has seen various improved government policies. These include the previously mentioned improved regulation on ivory trade and the stricter registration procedure for new-born elephants. Additionally, Thailand has drafted an animal welfare act, however, its application to captive elephants remains to be clarified.

Thailand is also home to a number of progressive elephant venues that strive to provide an alternative to the conventional elephant tourism entertainment. For example, Save Elephant Foundation has created an initiative to encourage replication of such projects by reaching out to elephant owners directly to change the way they work.

Figure 2: Numbers of international tourists arriving in Thailand



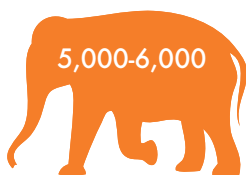
Source: Department of Tourism, Thailand.
Tourism numbers have doubled from 2010 to 2016.



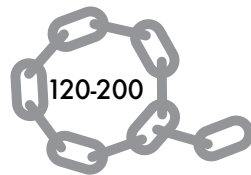
Image: Female elephants at Pinnawala, Sri Lanka during their regular river access.

Sri Lanka

Wild elephants



Captive elephants



Sri Lanka has the highest density of wild Asian elephants worldwide. It holds 10% of the wild population in just 2% of the habitat [67]. In 2011, the last census estimated the population of wild elephants at 5,879. Wild elephants are protected under the Fauna and Flora Protection Ordinance. This prohibits the killing or poaching of animals. Offenders face fines up to US\$4,500 and/or 2-5 years' imprisonment. The biggest threats to wild elephants in Sri Lanka are habitat loss and fragmentation. The continuous encroachment of people into the elephants' habitat leads to about 200 killings of elephants and 71 human fatalities by elephants per year [68].

Sri Lanka's elephant heritage dates back several thousand years to pre-BC dates where elephants were caught in the wild for the Sinhala kings. During colonial times Dutch or British rulers owned most captive elephants. Later, elephant capturers were sometimes allowed to keep one or two elephants. This tradition has led to continued private ownership of elephants in addition to royal or government ownership [69].

Today captive elephants are kept by private owners, temples, zoos and government facilities, such as in Pinnawela and the Elephant Transit Home. Wild elephant calves, orphaned during human-elephant conflict incidents are brought to the Elephant Transit Home for later reintroduction back to the wild or to Pinnawela. Pinnawela functions as a major tourist destination near Colombo.

In 2002 about 214 elephants were in captivity in Sri Lanka [56]. However, since then this captive elephant population has been frequently repopulated with illegal wild captures of elephants. Laundering the wild-caught calves into the legal population is profitable and usually well-connected people are involved in these attempts. The Centre for Eco-Cultural Studies and other like-minded organisations are focusing on filing court cases in such incidents and providing evidence to ensure persecution [70].

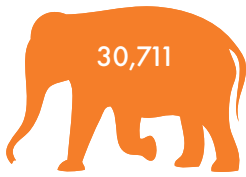
Sri Lanka also uses its elephants as diplomatic gifts to other governments. This, given their often-wild origin and likely destination in zoos raises ethical questions around shipping wild elephants across the world to be kept in captivity at zoos unlikely to meet their needs. Increasingly this practice is met with outcry from within and outside Sri Lanka arguing that separating elephants from their families and sending them to lower welfare conditions purely for commercial or diplomatic exploitation is not acceptable [71].

The use of captive elephants in temple parades and the conditions the elephants face at those temples has also been a major animal welfare concern.

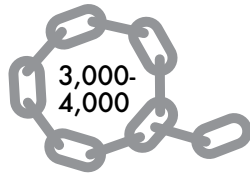
Public pressure has led to Sri Lanka better regulating the use of young elephants. In 2016, the wildlife department issued new regulations that banned the use of elephants below 10 years for work, and below five years for parades [72]. While only a small step, it is a step in the right direction.

India

Wild elephants



Captive elephants



India is widely considered the birthplace of taming elephants for use by humans – a practice which began thousands of years ago. India's captive elephant population seems relatively stable, estimated at around 3,000 in 1985; 3,400–3,600 elephants in 2002; and in 2015 the number was still estimated to be between 3,000 and 4,000 elephants [13,67,73]. In comparison, India is home to up to about 30,711 wild elephants as per the last government census [74]. This is by far the largest portion of the Asiatic elephant population, with up to 60% of the global wild population [75].

In 1992, the Indian government started 'Project Elephant' to protect wild elephants, establish elephant reserves, mitigate human-elephant conflicts and ensure better welfare for captive elephants through management guidelines and workshops. Captive elephants must be microchipped and owners need to provide a valid ownership certificate. These are issued for five years at a time. In case of violations against elephant regulations, these certificates may not be renewed after those five years. However, cases of unregistered elephants regularly occur, posing concerns as to laundering wild elephants into the captive elephant population [76–78].

Captive elephants are kept by the state governments in forest camps, zoos or some temples; by circuses, or by private owners using them for tourism, begging or other purposes. The conditions the elephants face in captivity are concerning. As discussed in the previous chapter, the study by ANCF and CUPA [13] documented severe short-comings in welfare standards for most captive elephants. Conditions at governmental forest camps were usually better than those in private hands or in temples.

Partly due to the ANCF and CUPA studies, India declared in 2009 that captive elephants in zoos and circuses must be relocated to government camps [79]. It was understood that the elephants' needs could not be met in the captive environments where they were currently held in and that they would be better cared for in government sanctuaries. At the same time, India declared that breeding efforts at those facilities have no valid conservation output. This is because even in the best case, they would only sustain the captive population with no chances for reintroduction to the wild.

Furthermore, the Indian government acknowledged the welfare concerns of captive elephants and the need for better protection of wild elephants, by supporting the formation of an Elephant Task Force. The task force's report provided a range of suggestions on how to improve the legal situation of elephant ownership, the care of elephants and the skills of mahouts [80].

In 2016, following several campaigns of animal rights advocates, the Animal Welfare Board of India issued formal advice to the ministry of environment, forest and climate change to ban the training, exhibition and use of elephants for performances in India. This successfully led to India's Central Zoo Authority revoking the rights of circuses to keep wild animals, effectively ending the use of elephants for performances in circuses [81].

One of the first sanctuaries for captive elephants opened in 2010 in Uttar Pradesh, India. It now keeps around 20 elephants in improved conditions and without offering any rides or shows [82].

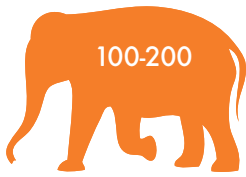
Nonetheless, the situation for captive elephants is concerning, including their use for tourist rides and illegal trade. TRAFFIC regularly assessed the Sonapur cattle fair in Bihar for any occurrence of illegal trade. In 2013 and 2014 they found between 37 and 39 elephants for sale – a clear breach of existing laws that restricts the sale or transfer of elephants from one person to the other [83,84].



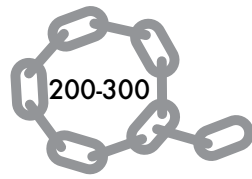
Image: Bull elephant at a forest camp in India.

Nepal

Wild elephants



Captive elephants



As with other elephant range states, elephants are an important part of Nepal's heritage; there is a long history of captive elephants. In 2008, 109-142 resident and migratory wild elephants existed in Nepal; their population was fragmented and widespread. Increasing fragmentation of remaining forests, encroachment by humans, and increasing migration of elephants from India are causing further challenges in managing and preventing frequent human-elephant conflict situations [16].

In the past, captive elephants were used for hunting expeditions and cultural functions [46]. The capture and training of wild elephants was a common practice with 31 elephant camps throughout the lowlands of Nepal from 1898 until 1970 [16]. However, the number of captive elephants decreased from an estimated 325 in 1903 to 50 in 1973.

In 1978 the management of 'domesticated' elephants was given to the Department of National Parks and Wildlife Conservation (DNPWC). Increasing demand for elephants for patrolling and park management duties and the difficulty of legally procuring elephants from India, resulted in an elephant breeding centre being established in Chitwan National Park (CNP) in 1986.

By 2003 numbers had increased again with about 153 captive elephants in Nepal. [85]. This increase was due to a government breeding programme and increased acquisition of elephants by private tourism operators. Six resorts were based inside CNP owning 70 'safari elephants' and 25 elephants were maintained outside the park for elephant rides [46]. In 2011, 208 captive elephants (94 of which are government owned) [16], and in 2014, 102 privately owned safari elephants, were reported [46].

Today, government-owned elephants are mostly used for the management of national parks and research, and privately-owned elephants for safari tourism. There is evidence for concern over the welfare of captive elephants in Nepal. The legal protection of Nepal's captive elephants is weak. There is no animal welfare act or welfare guidelines for elephants [46].

Despite these concerns, there have been positive developments in recent years. Elephant Aid International has successfully collaborated with the government to provide electric fence enclosures to government elephant camps, to prevent the chaining of elephants [86]. The Nepalese government is one of the first governments making such important commitments to elephants' welfare.

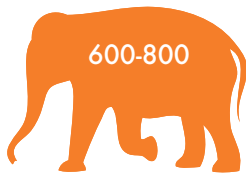
In 2016, Tiger Tops, one of the first companies to offer elephant-back safaris decades ago, has decided to stop offering elephant rides. It has built large-scale enclosures for their elephants that allow for unrestrained movement and social interaction between elephants. Tiger Tops also decided to abandon the hosting of the annual elephant polo tournament for animal welfare reasons [87].



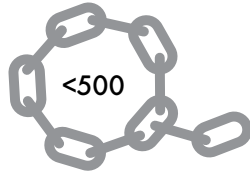
Image: Safari-ride elephant tethered to a shelter in Nepal.

Laos

Wild elephants



Captive elephants

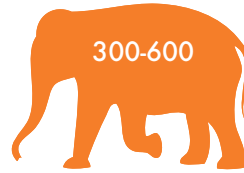


Laos is known as the 'Land of a million elephants' which reflects the historic importance of the species to the country. Historically Laos had large and widely distributed populations of both wild and domesticated elephants. In the late 1980s, the wild elephant population was estimated to be 2,000–3,000 animals. More recent estimates show the wild population in decline at 600–800 [88]. As with Nepal, threats to elephants include fragmented habitat and human-elephant conflict.

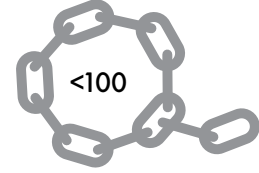
Laos has a strong tradition of using elephants as working animals. Most are used for timber harvesting operations by logging companies, transporting goods and providing rides for tourists. Captive populations are also declining in numbers. The number of captive elephants in Laos in the late 1980s was estimated to be 1,332 animals, 864 in 2000, and 500 in 2009 [88,89]. The registration of captive elephants in Laos is required by law. Hunting of protected species, such as the Asian elephant, is strictly prohibited.

Cambodia

Wild elephants



Captive elephants



Elephants in Cambodia hold cultural significance, particularly for their critical role in their building of the 12th century temple of Angkor Wat – the largest religious building in the world. In addition to habitat loss, elephant numbers suffered during the civil war of 1975–79.

Under the Pol Pot regime, people were forced to hunt elephants and other wildlife for food. Elephants were also hunted by Khmer Rouge soldiers. The long period of political unrest along with widespread firearm ownership resulted in massive decimation of wildlife, including elephants [90]. Habitat loss and degradation are still key threats.

Reliable estimates of wild and captive population numbers are scarce for Cambodia. Most accurate estimates suggest a wild population of 300–600 remaining elephants [90,91].

Captive elephants are required by law to be registered with the Forestry Administration, with most being privately owned. Estimated captive population figures are considered to be around 93 today [90], down from 162 in 2002 [91]. These figures show a general decline in captive numbers. Elephants are rarely bred in captivity due to local taboos and financial concerns, and there is currently no effort to breed captive populations. Although animals were taken from the wild, this has decreased due to less demand for captive animals and alternative incomes for local people.

Scope and methodology

Study scope

This study, conducted between November 2014 and May 2016, assesses the scale of the captive Asian elephant tourism industry across Thailand, Sri Lanka, Nepal, parts of India, Laos and Cambodia. It provides clarity about the conditions the elephants face in the industry by assessing aspects of their welfare at each venue. This research updates a 2010 study on elephant welfare in Thailand and identifies broader trends in the captive elephant tourism industry in the country.

The studies focused on elephants in venues accessible to tourists, and so does not reflect 100% of the captive elephant population. For instance, in 2001 it was estimated that in Thailand between 1,200 and 1,400 elephants were 'unemployed' [92]. Usually these elephants would be kept near their owner's villages or used for illegal logging activities. In other countries elephants would be kept at temples for ceremonies, or kept by government authorities for use in national park law enforcement activities. A welfare assessment of the husbandry of those animals was not within the scope of this research. This choice of focus on tourism elephants was made due to World Animal Protection's campaign focus. It does not suggest that elephants in other captive situations do not suffer or do not require attention.

Except for India, the aim was to identify and visit as close as possible to 100% of the existing captive elephant tourism venues. These included elephant riding camps, elephant shows in zoos, elephant-care tourism experiences or venues focusing on providing better alternatives to captive elephants without offering rides or shows.

The venues were identified through a review of internet sources, guidebooks, interviews with local experts and plain and simple, street-by-street physical scouting for venues in tourist areas likely to have elephant attractions. In Thailand, the GPS points of the venues identified in the 2010 study proved to be very useful in addition to the other methods.

This study only provides names of the top-ranking venues in the Appendix. Other venues are not named. We acknowledge that practices may change at venues and we would like to avoid misrepresenting venues in this report once they have implemented improvements.

All venues were visited by the researchers in person at least once, sometimes repeatedly, to document the situation and ensure an objective assessment not reliant on hear-say or anecdotal evidence. It was not possible to conduct personal visits to some venues. These venues are not included in the analyses, yet we have listed them separately for transparency reasons.

Assessment tools

For each venue a range of information was collected. This included: the number and genders of elephants; the way they were kept day and night; stereotypic occurrences; the daily routines; interaction with keepers, and activities the elephants were used for.

The data was collected mostly through direct observation in combination with interviews with staff on site. Photographs and occasionally videos were taken to document the findings.

At each venue, a rapid welfare conditions assessment was completed, using a score sheet approach. This score sheet covered nine categories with a significant direct impact on an elephant's welfare. The researchers scored each venue along a 5-point scale from 0-4 for each of those categories. The total score for each venue was converted into a single final score on a scale from 1 (worst) to 10 (best possible captive conditions). Calculating the final scores required rounding of the individual scores. Scores of 0.0-0.4 were rounded down, while scores of 0.5-0.9 were rounded up to the next digit.

This rapid welfare conditions assessment was created to allow for the large scope of this study; it is not an attempt to be fully comprehensive. It does not provide a direct measurement of an individual elephant's welfare. It evaluates the conditions that affect welfare and that the animals would face on a daily basis. The study identifies key areas of welfare concern and in previous published studies this methodology has proven to give a good indication of the situation for elephants.

Findings

Asia

The research confirmed the ongoing popularity of elephant attractions throughout Asia.

In total 2,923 elephants were kept at 220 identified and assessed venues. Elephant rides were offered at 189 venues, housing a total of 2,454 elephants. More than 80% (160) of those sites used wooden or steel saddles. The remainder offered rides without saddles, for example as part of courses that teach visitors the basics of how mahouts manage their elephants.

Elephant circus shows, could be seen at 38 venues, often several times a day. These venues would almost always offer saddled elephant rides as well. Twelve venues offered bathing and washing elephants without offering rides. A further 12 venues offered purely observational activities without any washing and no short-chain use.

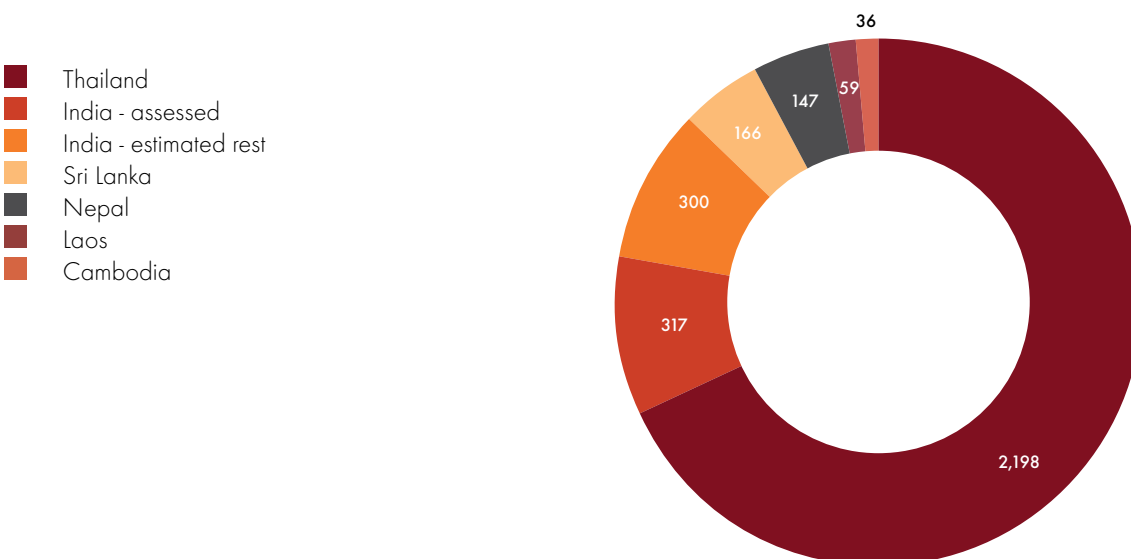
Thailand uses roughly twice as many elephants in tourism than all the other countries combined (Figure 3). This is not surprising considering the large numbers of captive elephants in Thailand and its booming tourism industry that surpasses by far all other countries included in this study.

India and Sri Lanka also have other uses for their captive elephants outside of tourism, such as for ceremonial or religious uses, or for enforcement work in national parks.

Our research shows that 2,242 elephants (77% of all elephants) are kept in severely inadequate conditions, represented by welfare scores of 5 or lower on a welfare conditions scale from 1 (worst) to 10 (best).

During the day, when not being used for rides or shows, 1,839 of the elephants were chained on short chains of a maximum 3m long.

Figure 3: Number of elephants in tourism by country.



Due to India only having been partially assessed this includes an estimated figure for the remaining numbers of elephants in tourism in order to provide an accurate representation of the situation..

The welfare conditions for captive elephants across the assessed countries is deeply concerning. Our research shows that 2,242 elephants (77% of all elephants) are kept in severely inadequate conditions, represented by welfare scores of 5 or lower on a scale from 1 (worst) to 10 (best) (Figure 4).

For those elephants it means being chained day and night when not used for activities and being allowed only the bare minimum of social interaction if any. They are fed an inadequate diet with very little variation, have no access to appropriate veterinary care and face generally stressful environments. These can include loudspeakers, concrete shelters, large visitor groups or roadside locations.

During the day, when not being used for rides or shows, 1,839 of the elephants were chained on short chains of a maximum 3m length. A further 608 elephants were chained on long chains outside of rides and 2,154 elephants were kept at venues offering saddled rides to tourists every day.

Improved conditions, represented by scores from 6-8, were experienced by 487 elephants. Their venues provided a more natural environment, less intensive tourist activities - no saddled rides. These venues also featured more knowledgeable and caring staff, limited working hours and usually better working conditions for the mahouts as well.

However, even at those places, elephants were mostly restrained by chains, albeit usually longer chains. They were used for activities requiring constant control of their mahouts so that tourists could safely participate in direct interactions with them.

Lastly, 194 elephants were kept at venues where conditions were described as best possible under captive conditions, receiving scores of 9 or 10. Usually this involved chain-free access to enclosures or natural habitat, social interaction with other elephants on their own terms and formation of social bonds. There were also usually opportunities to browse or forage themselves in natural habitat. Visitors had very limited or no direct interaction with the elephants.

On the next page Table 1 provides a description of the most common conditions at the various camps according to their scores. Please note: exceptions to those descriptions did occur and the table only describes the most likely scenario for each score category - as evidenced through the assessment visits.

194 elephants were kept at venues where conditions were described as best possible under captive conditions.

Figure 4: Welfare conditions for elephants at venues in Sri Lanka, India, Nepal, Thailand, Laos and Cambodia combined, as found by this study.

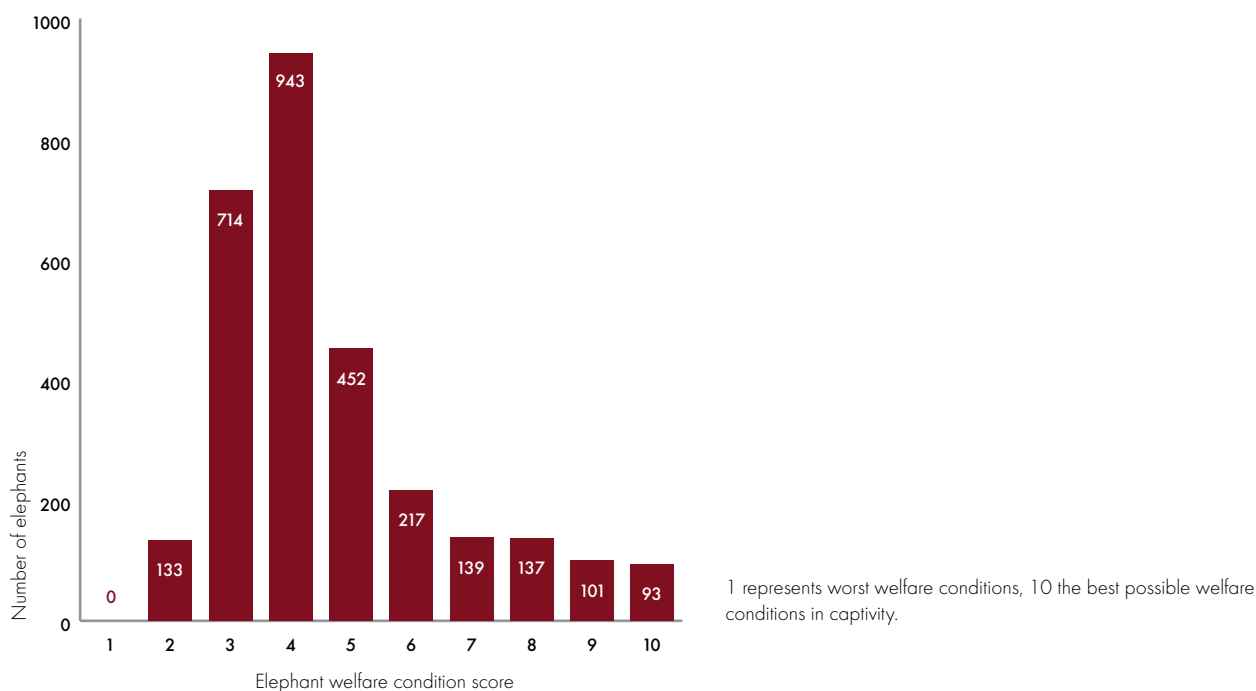


Table 1: Description of the typical conditions for elephants at venues with low, medium and high scores as per this study's welfare condition assessment.

	Freedom of movement	Social Interaction	Hygiene
Scores 1-5	<p>Elephants are usually restrained with 1 -2m long chains, standing side by side on concrete or sometimes on dirt. Elephants are only allowed to move during the tourism activities or during morning/evening routine of showering the elephants.</p>	<p>Many elephants may be able to interact with their direct neighbour through trunk touches. However, the level of interaction is very limited and more complex relationships are impossible under these conditions. Compatibility of elephants to each other would often not be respected when chaining them up beside each other. This can contribute to higher stress levels. Bulls are often chained up in isolation, even when not in musth. Calves are separated from their mothers at 1 -2 years of age.</p>	<p>Elephants are usually showered once or twice per day, using a water hose in combination with a brush. Where access to a river or lake is given, the mahouts may bring their elephants there for bathing. Mud baths or sand pits are not available. Old faeces often accumulate for days around the standing ground of the elephants. limited drainage leads to urine smell or wet standing grounds. In urban areas, garbage may be left near the elephants.</p>
Scores 6-8	<p>Venues usually avoid using short chains or having the elephants stand on concrete. Mostly long chains of up to 1.5m or more are used during restraining times. During the day, the offered activities may allow for some sort of freedom to move independently. At night elephants are usually chained in the forest or in fields on long chains.</p>	<p>Elephants in medium-ranking venues are allowed slightly more social interaction. Limited socialisation with other elephants is usually permitted. However, this will commonly not allow for the creation of social groups or expression of more complex behaviour. Calves stay with their mother for a little longer than two years or may even remain with the mother for several years at the higher scoring venues of this category.</p>	<p>Elephants usually have access to a river for a daily bath and scrub by their mahout. Depending on the offered activities, further baths may occur as part of the tourism experience. The elephants are under control for most of the bathing time. Standing grounds are usually clean and dry, with faeces being removed daily. At the higher-scoring venues a mud puddle may be available to the elephants at times.</p>
Scores 9-10	<p>At the highest-ranking venues, elephants are usually not chained at all during the day. Due to the limited direct interaction with tourists, the animals are able to move around freely on their own terms - under supervision by mahouts that interfere if required. At night elephants may either have access to fenced enclosures or in some cases may be chained on long chains, eg in natural habitat with foraging options around them.</p>	<p>The highest-ranking venues allow their elephants to interact in groups and sometimes house family herds. Mahouts and management often try to match the elephants based on their compatibility to each other to ensure social bonding. Full range of social interaction between elephants without restraints is allowed. Most higher-ranking venues restrict captive breeding to prevent a further increase of the captive elephant population and reserve resources for existing elephants in need.</p>	<p>Elephants get access to water every day, often for several times either as part of a walk or within their roaming area. The animals are able to bathe on their own and use the time to play or interact with other elephants. They are usually able to choose freely when to bathe and when to do something else. Mahouts occasionally supplement the bathing with scrubbing and traditional care processes. Due to the elephants mostly not being fixed to a specific standing location, the elephants are free to choose their own bathing spots.</p>

Nutrition

Lowest-ranking venues usually provide sufficient amounts of foods. However, the quality of the food is inadequate. In venues in the south the diets primarily consist of pineapple leaves, supplemented by smaller amounts of grasses. Pineapple leaves are cheap and easy to acquire, however, such a monotonous diet is very concerning from a nutritional context. Furthermore, the provided food often bears the risk of being contaminated with insecticides or pesticides.

Middle-ranking venues provide a more varied diet, consisting of several cultured ingredients, such as elephant grass, sugar cane, banana tree stems, etc. This is an improvement to the monotonous diet in lowest-ranking venues, but still bears risks of pesticide contamination and insufficient variation. Food may also not be available at all times throughout the day. Water access is usually provided only once or twice per day.

Elephants at highest-ranking venues usually receive a mixture of a varied diet with cultured ingredients of higher quality, complemented with access to natural browse for foraging during the day and at night. Cultured ingredients may be washed before providing them to the elephants to minimise pesticide-caused problems. Elephants are likely to have constant access to drinking water.

Environment

Environments are usually urban, as many of these venues require easy access for larger numbers of tourists. Consequently there is often noise pollution through traffic and loud-speakers. Smaller venues outside of urban centres are often located directly beside the roadside to attract visitors.

Environments are usually rural or sometimes near forests. These venues usually depend less on walk-in visitors and are able to choose more remote locations, providing a more natural environment than the lower ranking venues. At times noise pollution due to larger visitor groups may occur.

Environments are mostly entirely in the natural environment; some venues are very remote. Either a small visitor base with thatched huts or simple houses exist or the visitors would be taken out into the forest to view the elephants. There is very little or no noise pollution is present. A few of the venues with larger numbers of visitors may not provide fully natural environments. In these cases elephants are largely kept on wider pastures or on land with artificial shades.

Tourist interaction

Tourists mainly visit these venues for saddled riding or watching elephant shows. Feeding of elephants before or after these activities is common, as well as posing for selfies in close contact with the elephants. Some show venues allow visitors to sit on the elephant while the elephant stands on their hind-legs, or have the elephants lift the visitors in their trunk. Rides are 15-30mins and usually follow identical paths at every round. Venues with high numbers of tourists have queues of elephants from morning to evening. They pick up visitors from a tower and carrying them on a short trek before lining up again for the next visitor group. The stressful environment often also results in injuries and marks on the elephants' heads from use of bull hooks.

The middle-ranking venues are either saddled riding venues with strict regulations as to how many rides each elephant can give and for how long. Alternatively they may offer half-day or day-long activities where visitors get assigned an elephant and learn to control, command it and care for it. While these activities are less intense than saddled rides, they bring visitors into very close contact with the elephants, requiring full control of the elephant at all times. Venues at the higher end of this category only offer activities such as feeding and bathing with elephants. This involves close direct contact at least during some of the activities, but for the most part elephants are left to do what they like to. There is a higher risk of injury to visitors and disease transmission through such close interactions.

At the highest-ranking venues, no direct interaction between visitors and elephants is offered. Visitors observe elephants behaving naturally, interacting with other elephants or browsing in the forest. These experiences are often felt to be extremely rewarding as they convey best the nature of elephants. Also the lack of direct interaction ensures these activities are safer for visitors and least stressful for elephants. Education of visitors is usually taken very seriously and provided through dedicated and knowledgeable staff.

Elephant management and mahout living conditions

The focus of these venues is usually on quantity of visitors and less on welfare of elephants or mahouts. Veterinary care may be accessible only through transporting the elephant for a long distance. Mahouts are more likely to be unskilled labourers that have received only brief training on how to handle elephants. Consequently, force and punishment of elephants is applied more commonly. Other times they may be professional mahouts, but prefer working at these camps to make more money through tips from visitors. Venue management usually only provides minimal living conditions for mahouts that are concerning and show a clear lack of respect for the profession.

Middle-ranking venues do usually employ better qualified mahouts and offer more regulated working times. Mahouts at times use bull hooks and other tools inadequately for punishment, but less frequently. Venue management will call for external vets to treat their sick elephants or some of the larger venues have their own vet staff on site. Still the focus for managing their elephants is primarily on ensuring smooth operation of the business and only secondarily dictated by what is good for the elephants.

Elephant management at these venues usually prioritises the welfare of the elephants over control of elephants. Due to less direct interaction with tourists less control over elephants is permissible and allows for a less stressful environment. Mahouts for the most part are very highly recognised by the venues and are often personally introduced to the visitors, allowing them to be respected for their skills. At the highest-ranking venues, the mahouts will also receive training in managing elephants more humanely, without using force. Some of these venues are applying positive reinforcement training techniques to complement conventional elephant handling with a more humane approach.

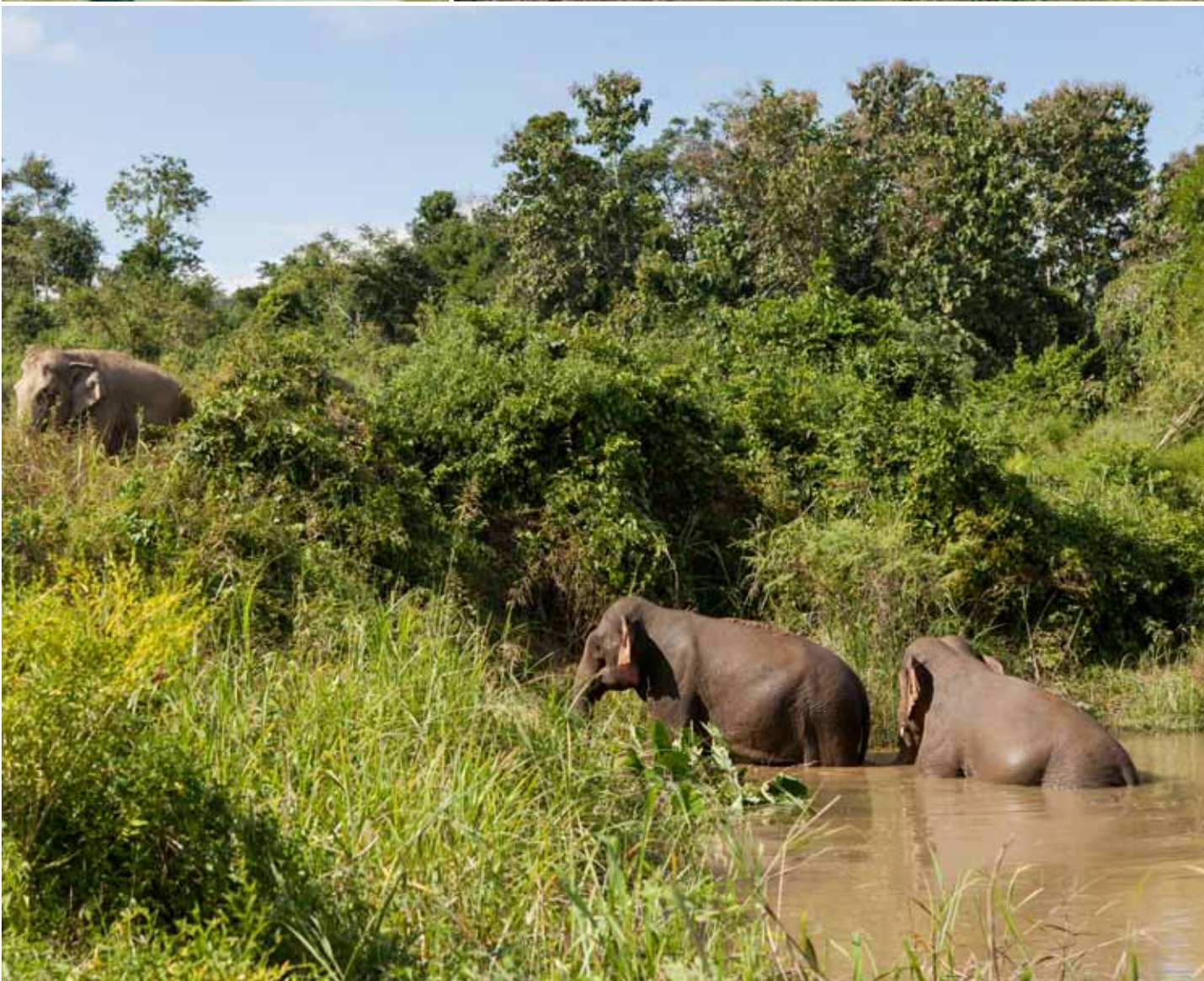
The following images give a visual representation of certain aspects that relate to the above groups of welfare condition scores. The images only represent specific conditions at selected venues to visualise the relevant score groups - they do not necessarily correlate with the overall score that a depicted venue will have received through this assessment.

Lowest welfare venues with scores of 1 to 5 kept elephants restrained with short chains and often standing on concrete. They offered a large number of saddled rides; and provided limited opportunities for social contact between elephants and a mostly inadequate diet.





Medium welfare venues with scores of 6 to 8 gave elephants a little more freedom when not in activities. There were no short chains or concrete ground; rides were offered without saddles or close contact activities. The settings were more natural, allowing elephants the possibility to interact somewhat with others and eat a more varied diet.



High welfare venues with scores of 9 to 10 limited direct contact with elephants or restricted it completely. They provided free-range opportunities for elephants all day, allowing them to socialise in natural herds. They also gave access to rivers and natural habitat for foraging and trained their mahouts to manage the elephants in humane ways.

While these welfare condition scores are based on a relatively complex scoring system, our data shows that it is also possible to gain vague indications of the welfare conditions by simply looking at the activities offered by the venues.

Figure 5 shows that venues offering elephant shows or saddled elephant rides dominate the lower ranking welfare scores. They are followed by venues that only offer rides without saddles, such as venues that offer to 'Be a mahout' for a day.

Higher scores were usually achieved by venues that do not offer any riding, but close direct interaction, such as washing of elephants. Lastly, the highest welfare conditions score was achieved by venues only offering observational activities with no close direct interaction with the elephants and where those elephants have free-range opportunities. There are exceptions to these rules as Figure 5 also shows. For example, venues with a score of 7 can be found across all those four different activity types.

The assessment used in this study primarily includes only provisional factors - factors in the elephant's environment that affect its welfare. However, we also collected data on direct welfare indicators, such as behavioural abnormalities including stereotypies. Stereotypic behaviour is only found in wild animals held in captivity and is usually an indicator for acute stress that can lead to chronic behaviour problems if not addressed.

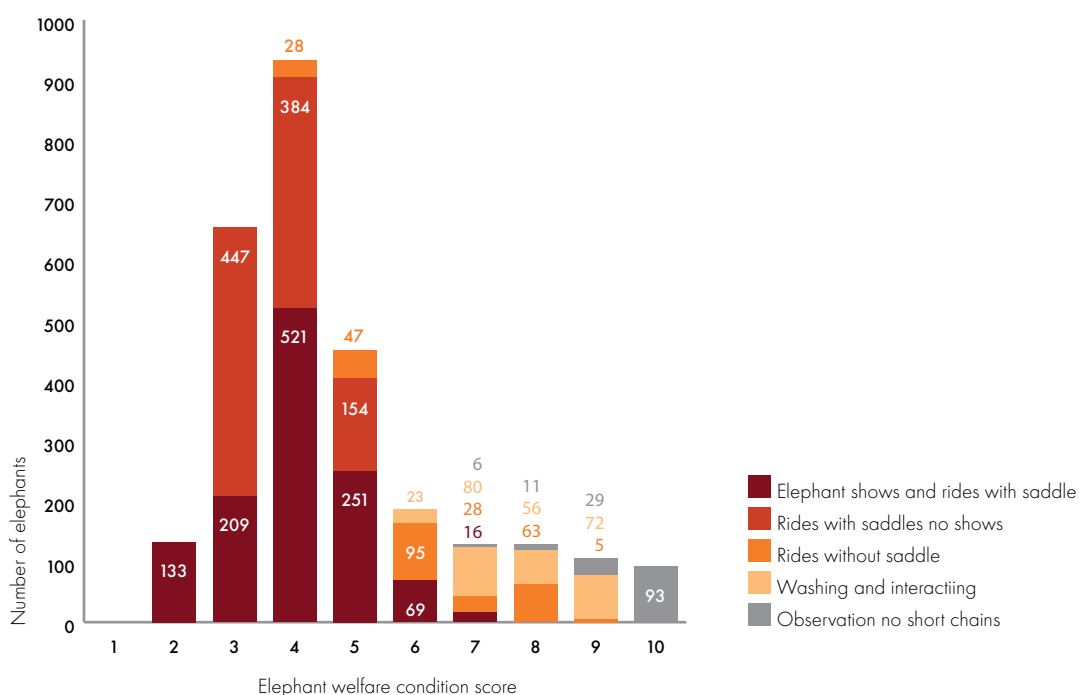
A common cause for stereotypies can be restraint, which may not allow the elephant to carry out actions it would like to do at a specific time, leading to stress. Typical stereotypic behaviour in elephants can be repeatedly shifting weight from one side to the other, moving a few steps forward and backward continuously, or bobbing the head up and down. Numerous other stereotypic behaviours can be identified as well. Stereotypic behaviours are certainly not the only behavioural abnormality indicating welfare concerns, but other types of behaviour problems tend to be more difficult to diagnose, especially in short observation times.

In this study **we registered 556 elephants displaying stereotypies** in the 1,845 elephants that were not in any activity during the assessment visits. We excluded elephants that were in activities, such as riding, as usually such stereotypic behaviours are suppressed during activities.

We documented a clear correlation between the ratio of elephants expressing stereotypies and the welfare scores for the venue in which the elephants were kept (Figure 6). In venues with a score of 2, representing the worst conditions identified in this study, 90% of elephants that were not busy with a tourist activity expressed stereotypies. In venues with scores of 3, we still documented 51% of elephants with stereotypies. The ratio continues to decline with higher welfare scores.

Figure 5: Welfare condition scores according to their offered activities.

Venues offering elephant shows or saddled riding rank lowest (deep red and bright red), followed by venues offering rides without saddles (orange), venues offering only washing of elephants (tangerine), and venues with purely observational activities and not using short chains (grey) receive highest scores for the welfare conditions offered to their elephants.



Since India was only partially assessed, several venues there are not accounted for in this research. For example, unfortunately we were not able to assess the elephant sanctuary ran by Wildlife SOS. In the countries other than India an additional 12 venues were identified, but were not possible to assess. For Sri Lanka, Nepal, Cambodia, Laos and Thailand we are confident that our research has covered more than 90% of the existing venues.

Figure 6: Percentage of stereotyping elephants in all observed, non-active elephants.

Lower welfare condition scores clearly show higher percentages of stereotypic behaviour problems, possibly indicating higher stress levels.

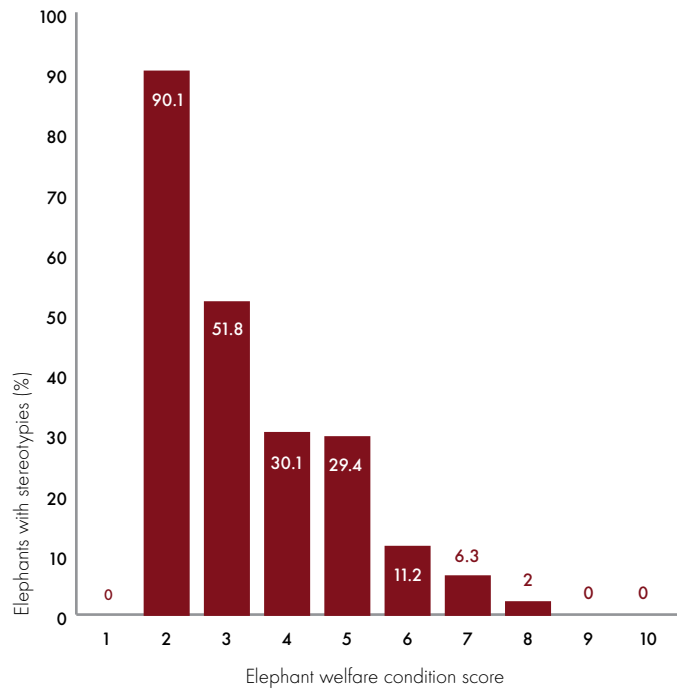
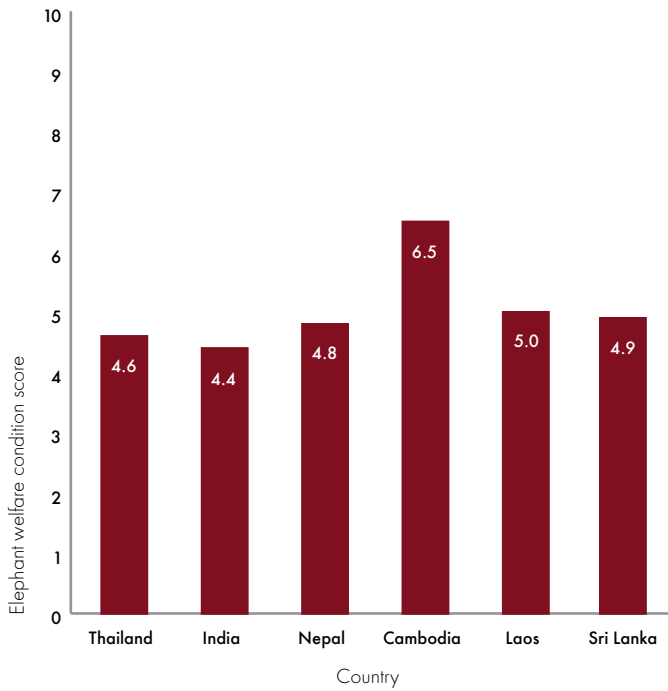


Image: Elephants on the way to a tourism venue in Cambodia.



Figure 7: Average welfare condition scores of elephant venues by country.



In comparison, the various countries show similar scores in their elephant welfare conditions, when averaging all individual venue scores (Figure 7). All countries, except Cambodia, show average scores of between 4 and 5 points. Cambodia scores significantly higher, as there are only very few elephants in four venues that this study assessed and two of those venues scored very highly. Most other countries also featured at least one venue that reflected a growing recognition of implementing higher welfare standards and avoiding conventional elephant entertainment.



Thailand

Scale of the industry and animal welfare

Thailand has by far the highest numbers of elephants used in tourism. Tourism was originally an alternative income source for elephant owners who previously worked their elephants in logging camps. With growing tourist numbers and increasing profits, tourism is the primary employment for elephants. Many were born after the logging ban in 1989 and made to work in the tourism industry ever since.

In 2010 World Animal Protection conducted the first study of its kind to assess the scale of the elephant tourism industry in Thailand and the welfare conditions for the elephants within it. The 2010 study found 1,688 elephants in 106 venues across Thailand. The vast majority were kept in severely inadequate conditions and only a few venues were not offering elephant rides and attempting to provide best possible conditions for the animals.

The current study allows us to compare the situation from 2010 with today and to explore what has changed. According to World Animal Protection's studies, in five years the number of elephants at tourism venues has increased by 30% from 1,688 to 2,198. Additionally, approximately 58 elephants are housed in 10 identified venues in Thailand that could not be assessed. Comparing the number of elephant venues from 2010 to 2015/2016 we found an increase of 50% from 106 to 160 venues (of which 150 were assessed).

When looking at the distribution of elephants according to the welfare conditions they face, it can be noted positively that in 2015 more elephants are kept at more venues with scores of 8 or higher than in 2010 (Figures 8 and 9). This reflects the trend, especially in northern Thailand, of venues

offering elephant attractions in more remote areas. These are catering to tourists that show interest in more personal experiences that do not involve saddled riding.

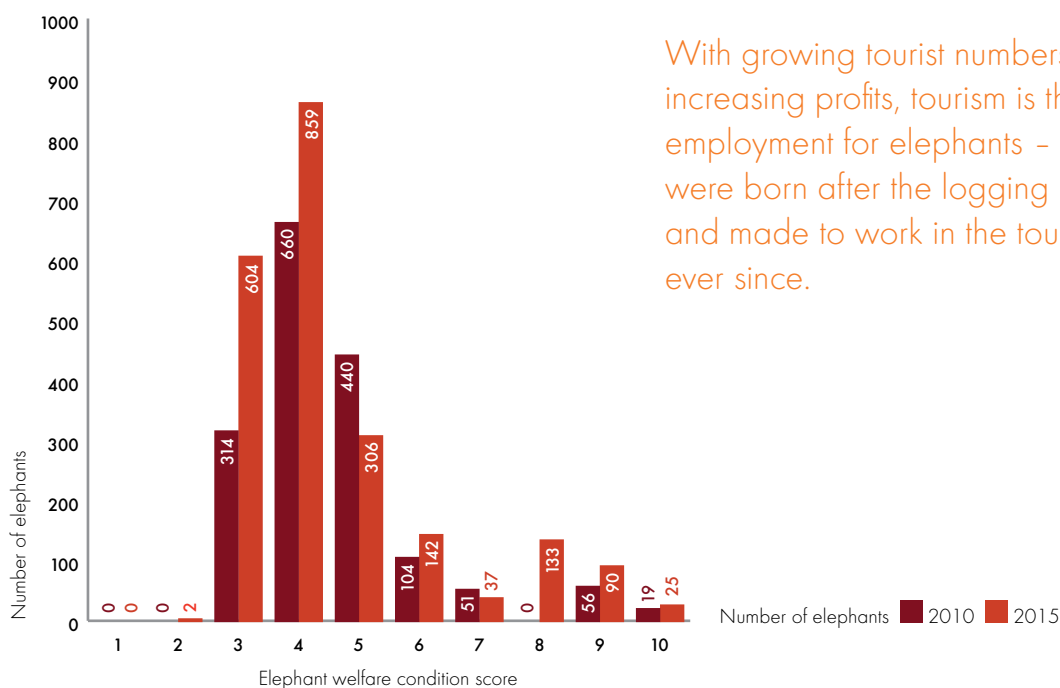
While this development is a step in the right direction, it is unfortunately not representative of changes across the whole elephant tourism industry.

By far the largest increase of elephants into the tourism industry has occurred at venues with scores between 3 and 4, synonymous with conventional elephant-ride venues that will chain their elephants for most of the day. This suggests that the demand for elephant rides has continued to increase, despite indications that some visitors prefer choosing non-riding alternatives.

However, for a successful phase-out of the captive elephant tourism industry, a demand for elephant rides must decrease in combination with increase in support for elephant-friendly venues. This will enable a real shift towards better conditions for the existing elephants.

Of particular concern in Thailand is the use of elephants in show performances, where the animals are forced to display circus tricks in front of large crowds. Many of these tricks originate from circuses and have been performed there for over 100 years. Elephants walking on tight-ropes, riding enormous tricycles, playing basket-ball, shooting darts, painting pictures and performing jerky 'dance' moves to loud music are all common to Thailand's elephant shows. The training needed to make elephants perform such tricks is particularly cruel and stressful. The tricks can lead to injuries and damage to the elephants' health. Displaying one of

Figure 8: Comparison of results from the 2010 and 2015 World Animal Protection studies on tourism elephant welfare in Thailand.



With growing tourist numbers and increasing profits, tourism is the primary employment for elephants – many of which were born after the logging ban in 1989 and made to work in the tourism industry ever since.

the most magnificent and endangered animals in such demeaning way raises grave concerns around the message communicated to the audience.

One of the largest show venues in Thailand offers elephant shows five to six times per day, using over a dozen elephants, including very young calves. In between the shows the elephants do not rest but approach the hundreds of visitors to lift them up in their trunks and perform for selfies. Thailand is still home to elephants in the wild and prides itself on respecting these animals as national symbols. Consequently, the display of elephants in these shows is hard to align with these statements.

Most of the elephant venues with higher scores can be found in the north of Thailand, near Chiang Mai. Visitors to the north seem to be willing to invest more time and money when experiencing elephants. Increased animal welfare consciousness, especially in younger travellers, has led to a rise in venues that label themselves 'rescue centre', 'retirement place', 'sanctuary', or 'refuge'.

It is difficult for a visitor to know whether these labels are true or appropriate - especially prior to the booking of a visit. In a number of venues labelled this way our researchers observed frequent chaining on short chains, strict schedules for elephant activities to meet the expectations of the visitors and elephant rides on the neck or on a saddle. The venues were also unable to be adequately transparent about how the elephants were acquired.

In a particular case, the researchers documented clear abuse of at least two elephants during one of the visits to

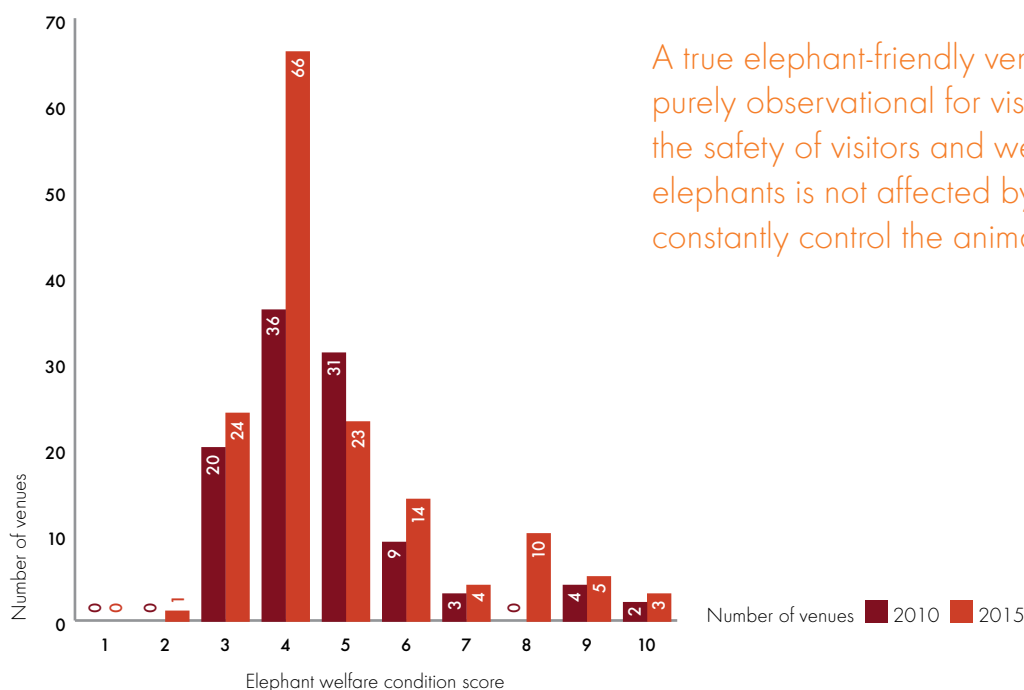
a so-called rescue centre. Staff at this venue jabbed metal poles into the back of the feet of an elephant for punishment, and just a few minutes later, another elephant was repeatedly hit with full force using a wooden stick.

Several venues have also started marketing themselves as 'no ride' venues, clearly catering to tourists that are aware of the concerns regarding elephant rides or wanting to have a different experience with elephants. In most of these venues the key attraction is to bathe with the elephants in a river and to feed them. This study shows that the welfare conditions at those venues are clearly an improvement to conventional elephant venues and a move in the right direction. But it must also be made clear that these interactions are only possible because the elephants have been cruelly trained at a young age to obey commands.

Furthermore, at venues allowing direct interaction it is essential that mahouts remain in control of their elephants to protect the visitors' safety. Since any direct contact activities have to rely on the traditional cruel training, it must be questioned whether sustaining demand for such activities is a long-term solution. Our findings also raise concerns that the close interaction between visitors and elephants leads to an increased risk of injury for the visitors, especially with young elephants around.

A true elephant-friendly venue is purely observational for visitors, where the safety of visitors and wellbeing of elephants is not affected by the need to constantly control the animals. The elephants would be managed in humane ways through the mahout who allows a maximum of freedom or through advanced 'protected contact' techniques.

Figure 9: Elephant venues in Thailand and their animal welfare scores as established by World Animal Protection in 2010 and 2015.



A true elephant-friendly venue would be purely observational for visitors, where the safety of visitors and wellbeing of elephants is not affected by the need to constantly control the animals.



Elephant population viability and economics

The study identified 160 elephants below the age of five at the assessed tourism venues, which calculates to an average of 30 new young elephants per year. Many of the venues display their young elephants as an attention getter, either by keeping a calf near the entrance or in some cases directly beside the road.

When questioned where the mothers were, most venues stated that the mother was in a different camp or in a completely different area of Thailand. This was a common occurrence even for elephants as young as two years and confirms the common practice of separating the calf from the mother prematurely to prepare it for a life in captivity. The higher a venue ranked in their welfare score the more likely elephant calves stayed with their mother and relatives for longer.

This study only included the elephants at tourism venues. These venues do not represent all captive elephants in Thailand (see background information, page 10). However, due to the attraction value of an elephant calf it can be assumed that most elephant calves born in captivity would be moved to tourism camps whenever possible. Yet, 30 captive-born elephants per year are not sufficient to sustain a captive population of between 3,500 and 4,400 elephants, let alone explain the continuing increase of the captive population in Thailand.

Consequently, either significantly more calves are kept outside of the tourism venues in rural areas, or the documented increase in captive elephant numbers relies on adult elephants introduced to tourism venues from other work purposes or illegally laundered into the country. The current ongoing efforts by Thai authorities to establish a DNA databank for all captive elephants will be helpful in the future to confirm captive-born calves.

The value of elephants seems to continue to increase. This study documented five sources which suggested prices for elephants between approximately THB1,000,000 and THB2,000,000, depending on gender, tusks and age (Table 2). This equates to approximately US\$28,000 to US\$56,000 for one elephant (currency exchange rate of THB34.91/US\$, as of 9/11/2016).

Such a price tag on the head of an endangered animal as a legal commodity is of serious conservation concern. In 2013, forged elephant papers could be acquired for US\$1,860 near the Thai-Myanmar border [10]. Most people in Myanmar are living on an annual income of less than US\$200 [93].

Consequently, such a high price on captive elephants in Thailand is a strong incentive for people to capture wild elephants and launder them across the border into the captive population. Stronger border policing and better elephant registration systems, such as the DNA database agreed in 2016, may help to a degree. But the border with Myanmar is long and mostly porous. There are also corruption concerns, so it remains questionable whether these mechanisms alone can solve the problem while captive elephants remain so valuable in Thailand.



Image opposite page, top left: A tourist poses for a selfie on a baby elephant. It is estimated that more than 2,000 tourists watch the shows at this venue every day.

Image opposite page, top right: Elephants are often asked to perform unnatural acrobatic tricks in shows. These tricks require cruel training and can cause injuries.

Image opposite page, centre: A young elephant chained to the ground beside a road all day and heavily stereotyping. Visitors could pay to feed the elephant and take a selfie.

Image opposite page, bottom left: Training elephants for attractions such as tight rope walking is extremely stressful for the animals and can lead to serious injuries.

Image opposite page, bottom right: A young elephant is forced to stand on its hind legs and rotate a ring. Throughout the show blaring dance music from loud-speakers is playing.

Image same page bottom: A captive born elephant calf with its mother. Often the calf will be taken away from its mother aged between one and two. In the wild the female offspring would stay with the mother and in the herd all life long.



Table 2: Reported rental and buying prices of captive elephants in Thailand.

Source ID	Monthly rental price of one adult elephant and mahout (THB)	Buying price for one healthy adult elephant(THB)
1	20,000	1,000,000- 1,500,000
2	30,000	
3	20,000	
4	30,000	
5		1,500,00
6		1,000,000- 1,500,000
7	20,000	
8		1,000,000- 2,000,000
9		780,000- 1,000,000

Table 3: Expenditure estimate for a large-scale elephant venue with 50 rented elephants, THB1,000 ticket price, 500 visitors daily.

Item	Monthly (THB)	Monthly (USD)
50 elephants and mahouts	1,250,000	36,765
Elephant food	3,000,000	88,235
Mahout ride bonus	600,000	17,647
50 staff for customer care, maintenance, transport	750,000	22,059
*Supplies	??	??
*Maintenance (cars, facility)	??	??
*Marketing	??	??
Total expenditure (not including *)	5,600,000	164,706
Income from sales	15,000,000	441,176



Image: The parking lot of an elephant ride and show venue in northern Thailand. This venue claimed to receive 700–1,000 visitors per day.

The high value of elephants is clearly linked to the profits they may be able to generate. Profitability in tourism depends heavily on location, tourist availability and marketing. Smaller-scale venues that may have fewer elephants usually generate much lower profit margins than larger venues. In response to this, many smaller venues will adjust the number of rented elephants throughout the year to adapt to the expected numbers of customers.

However, in the past few years a trend for the development of large-scale, heavily-promoted elephant venues have emerged. These venues cater primarily to tour groups and receive 1,000–6,000 visitors daily. They usually include elephant shows and short elephant rides, sometimes in combination with rafting on a river or a cultural show. The potential profit margin of these places is enormous, thanks to low upkeep prices of elephants, very low wages for mahouts and staff, and comparatively high ticket prices.

Table three shows a very crude estimation of turnover for a fictitious large-scale elephant venue. It is based on known elephant rental prices, feeding costs, mahout bonuses for each ride, additional staff, and ticket sales income. There is a significant margin between income and expenditure estimates of more than US\$250,000 per month (Table 3).

This calculation does not cover all the costs. It does not include expenditure items such as insurance, supplies, maintenance, marketing or initial investment, which may be significant. It also doesn't include income streams such as souvenir sales or beverages. Although crude, these estimates indicate that there are significant profits in running such venues.

However, no benefit transfers to the welfare of the elephants or to the mahouts. Equally, concerns about the impact such a profitable industry may have on elephants in the wild must be recognised (see page 18, Conservation value and captive breeding).

A high price on captive elephants in Thailand serves as a strong incentive for people to capture wild elephants and launder them across the border.

Conclusions and recommendations

We must champion pathways that retain cultural identity and do not inflict cruelty on animals. These pathways should encourage socio-economic development of communities and ensure better health and safety protection.

This study has assessed the scale of, and animal welfare conditions at, elephant venues accessible to visitors in Sri Lanka, Nepal, parts of India, Laos, Cambodia and Thailand between late 2014 and mid-2016.

Researchers have evidenced and quantified the welfare conditions endured by nearly 3,000 elephants involved in tourism in these countries. Three out of four of these elephants endured poor living conditions, such as chaining, lack of socialisation, inadequate shelter, poor food and stressful interactions with tourists. These situations are contrary to even the most basic needs of these intelligent animals.

The industry is also characterised by concerns for low living standards for mahouts and a worrying number of incidents leading to fatalities or serious injuries in mahouts and tourists caused by captive elephants.

And although the promotion of captive elephant entertainment can appear to reflect cultural traditions this study shows such practices involve significant animal welfare and conservation concerns.



Image: A mahout watches over two elephants at a venue that provides best conditions for the animals.

Key findings

- 2,242 (77%) of elephants used in tourism in Asia are kept in severely inadequate conditions, at venues rated 5 or less (out of 10) on an assessment scale for animal welfare conditions.
- Only 194 (7%) of elephants are kept in best possible captive conditions at venues scoring 9 or 10 on the welfare conditions scale. At these venues elephants can be observed by tourists without any direct interaction.
- Stereotypies (abnormal repetitive behaviours) were seen in 556 (30%) of elephants across all venues observed when they were not involved in a tourist activity, indicating their severe stress levels. Where venues scored only a 2, the lowest score received in this study, the stereotypies seen soared to 90%.
- Over five years since 2010, a 30% rise in the number of elephants has been documented in Thailand's tourism industry, from 1,688 to 2,198 elephants.
- The largest increase of elephants in Thailand was seen at tourist venues with welfare scores of between 3 and 4, indicating severely inadequate living conditions. At these venues elephants are made to offer saddled rides and often perform in shows.
- Venues offering saddled elephant rides and shows consistently ranked lower in their welfare conditions for elephants than venues that offered less interaction or only observational activities for visitors.
- Although huge profits may be made from elephant tourism, neither the elephants' nor the mahouts' working conditions are seen to improve in the venues catering to large numbers of tourists.
- The high value of captive elephants remains a strong incentive for illegal activities such as 'laundering' of wild-caught elephants into the tourism industry.
- In Thailand, the scale-down of the logging industry was part of the initial impetus to turn elephants in captivity to work in tourism. However, there are far more elephants in tourism now than in the original population of logging elephants. This highlights that captive elephant tourism has developed into the key driver for maintaining a captive elephant population.
- Most countries featured at least one venue that had a good welfare score of 9 or 10, indicating a growing recognition of implementing higher elephant welfare standards.
- In Thailand, 248 elephants were kept at venues with scores between 8 and 10 – a significant increase from the 75 elephants in similar circumstances in 2010. This is an important indication that welfare improvements are happening within some parts of the industry, despite an even greater increase in the numbers for poor-welfare conditions.

Putting wild elephants at risk

High-profit venues evidenced in this study cater to hundreds or even thousands of visitors daily and profit from exploiting Asian elephants, an endangered species. This not only perpetuates the cruelty of using elephants as entertainers but also poses a threat to the protection of elephants in the wild.

In some countries, captive breeding of elephants is likely responsible for many new elephants in the tourism industry. However, the commercialisation of captive elephant tourism risks opening up the market by also incentivising poaching from the wild. This is highly concerning and requires urgent action by all involved in the industry.

Leading by example

The research also found some positive developments. Most countries assessed had venues that strive to provide best possible conditions for captive elephants. These focussed on providing tourists with primarily observational experiences of elephants and did not offer elephant rides and other types of exploitative elephant entertainment.

While still few in number, these venues offering observation and not 'entertainment' are beacons of hope that can encourage the urgently-needed shift in the captive elephant tourism industry. Their replication, combined with increased tourist demand for better welfare venues and decreased profitability for low welfare venues, will benefit elephants, local communities, elephant caretakers and tourists themselves.

The study also revealed an increase in medium welfare venues – those that do not offer riding, but provide direct contact with elephants through bathing and selfie opportunities. Especially in Thailand this development seems to represent a diversification over a period of five years in the demand for elephant activities.

The increase in these types of elephant venues with improved welfare conditions must be recognised as a positive step towards better conditions for some elephants. However, the data does not yet show an actual shift towards better welfare across the whole population of captive elephants in tourism.

To achieve real welfare improvement for existing captive elephants and better protection for elephants in the wild, there is sadly no simple solution. Only by taking the following multiple approaches welfare and conservation concerns around elephant tourism can be tackled.

Recommendations

- **Enable and encourage replication of high-welfare, elephant-friendly venues.** Key to this is a shared understanding of the concepts of elephant-friendly management by elephant-owners and handlers. This should be backed by technical expertise, financial funding by governments, NGOs or the tourism industry, as well as local community inclusion.
 - **Channel tourist demand away from the worst activities, such as elephant shows and rides, to more humane alternatives.** Increasing demand by tourists for humane alternatives such as elephant-friendly venues will encourage conventional venues to change their practices.
 - **Devise a set of elephant-friendly tourism standards.** Within the wildlife tourism industry mislabelling of poor welfare venues as 'sanctuary', 'rescue centre' or 'retirement home' is common practice. Standards will help tourists and travel companies recognise truly elephant-friendly venues.
 - **Improve conditions for captive elephants not kept in elephant-friendly venues.** Better regulations paired with adequate animal welfare laws, and actual enforcement of these laws through well-resourced authorities, will protect elephant wellbeing.
 - **Stop elephants being poached from the wild for the tourist industry.** Better resourcing of enforcement authorities will enable the policing of border markets and the monitoring of captive elephant populations for irregularities.
 - **Ensure a loophole-free registration process for captive elephants.** Tamper-proof registration systems are essential for captive elephants. Combined with effective enforcement and legislation they will protect wild elephants from being poached from the wild and control the trade in individual elephants between owners.
 - **Limit captive breeding to facilities with genuine conservation value.** Only those facilities with the highest standards and driven by genuine conservation and science – not commerce – should be considered for captive breeding.
 - **Respect local cultures and address the needs of the mahouts and other elephant-dependent people by developing alternative livelihoods with them.** There are no quick fixes. Elephant-friendly projects should always factor in elephant-dependent people. We must champion pathways that retain cultural identity and do not inflict cruelty on animals. These pathways should encourage socio-economic development of communities and ensure better health and safety protection.
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Building a movement towards an elephant-friendly future

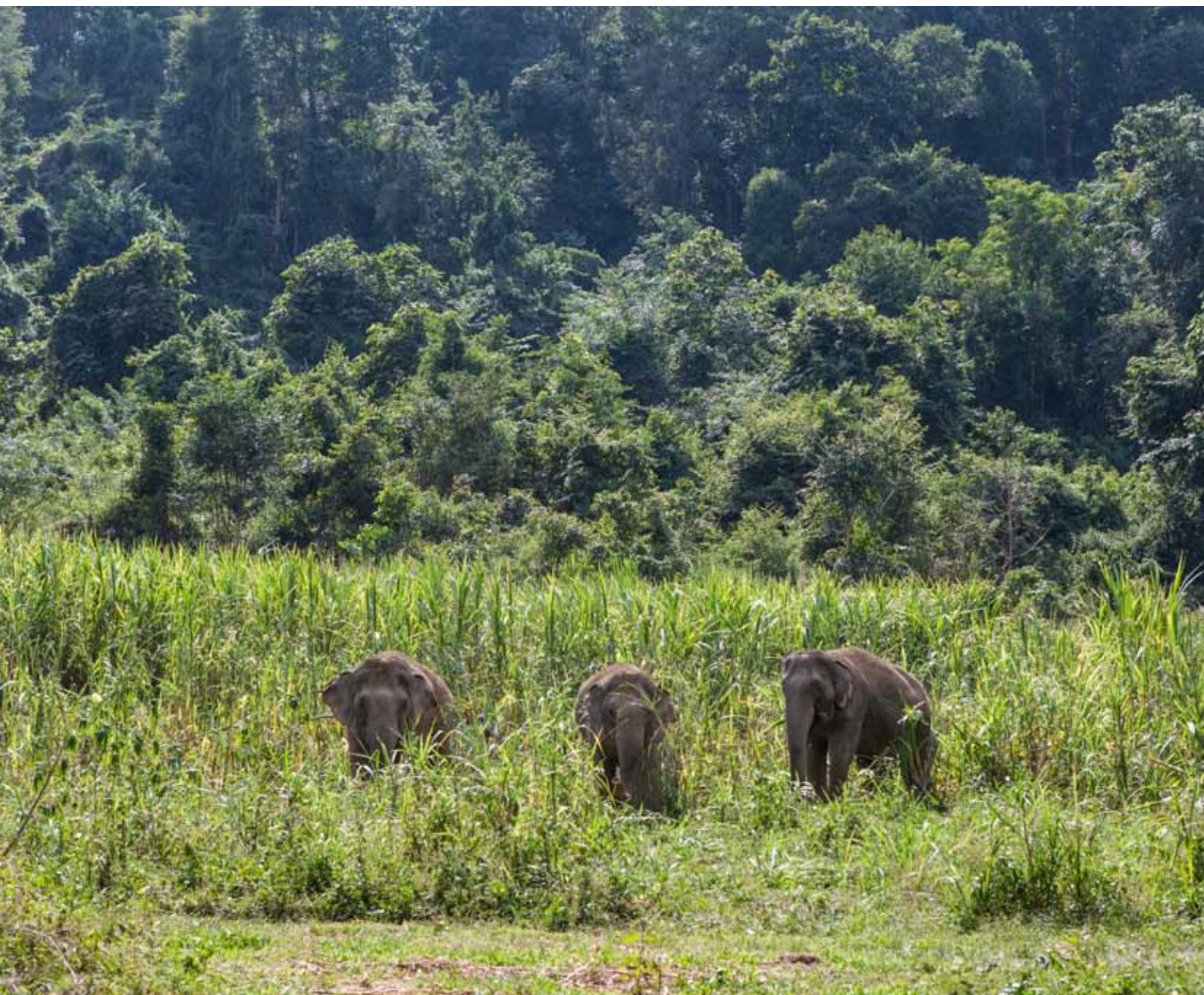
The findings of this research show the importance and urgency of building a movement to phase out the exploitation and suffering of elephants forced to entertain tourists. It is our aim to achieve such change through working with the tourism industry, local and national governments, elephant venue owners, elephant handlers and tourists.

As part of our Wildlife – not entertainers campaign, World Animal Protection...

- Raises awareness among tourists and moves people to take action together. Hundreds of thousands of people have already joined our global movement for elephants and other wild animals.
- Convinces travel companies to end their offer and promotion of cruel wildlife entertainment. More than 160 travel companies have committed to not sell or promote venues that offer elephant rides and shows and are choosing elephant-friendly alternatives. Many of these travel companies have also phased out all other offers of wildlife entertainment to their customers.
- Influences the travel industry and policymakers so they set ambitious welfare standards and legislation, and implement and enforce them.
- Works with leaders in the tourism industry to help existing elephant venues become elephant-friendly.

Together we can end the suffering of captive elephants in tourism. Elephants belong in the wild – not in entertainment.

Image: Three female elephants have formed a very close friendship at a venue in Thailand that does not allow for rides or shows.



Appendix 1

List of venues with best welfare conditions

Country	Name	Offered visitor activities
Cambodia	Elephant Valley	No rides, observing elephants, elephants free-roaming in natural habitat
Cambodia	Mondulkiri Sanctuary	No rides, observing elephants, following elephants in forest, occasional bathing with elephants
Laos	Elephant Conservation Centre	No rides, observing elephants, following elephants in forest, occasional feeding of elephants
Nepal	Tiger Tops Tharu Lodge	No rides, observing elephants, following elephants in forest and fields
Sri Lanka	Elephant Transit Home	No rides, observing elephants
Thailand	Boon Lott Elephant Sanctuary	No rides, observing elephants, following elephants in forest and fields
Thailand	Burm and Emily's Elephant Sanctuary	No rides, observing elephants, following elephants in forest and fields, occasional feeding of elephants
Thailand	Elephant Haven	No rides, observing elephants, occasional feeding of elephants, occasional bathing with elephants
Thailand	Elephant Nature Park	No rides, observing elephants, feeding of elephants, occasional washing of elephants
Thailand	Global Vision International Huay Pakoot project	No rides, observing elephants, following elephants in forest, occasional feeding of elephants
Thailand	Golden Triangle Asian Elephant Foundation	No rides, observing elephants, occasional lecture in elephant care
Thailand	Mahouts Elephant Foundation	No rides, observing elephants, following elephants in forest
Thailand	Wildlife Friends Foundation Thailand	No rides, observing elephants, occasional feeding of elephants, occasional washing of elephants

*Assessment scores 9 and 10 where 10 is the highest possible rating

Appendix 2

Unassessed venues

The following venues were identified during the study, but couldn't be visited or only opened after the field research was already completed.

Country	Name	Offered visitor activities*
India	Wildlife SOS Elephant Sanctuary	Operated by animal welfare NGO, no riding, other visitor activities unknown
Thailand	Chang Puak Camp Hat Yai	Saddled rides, shows
Thailand	Elephant Discovery Tour	Riding without saddle, washing of elephants
Thailand	Eddy's Elephant	Riding without saddle, washing of elephants
Thailand	Elephant Valley Thailand	No riding, no washing, observation
Thailand	Ganesha Park	Riding without saddle, washing of elephants
Thailand	Hope for Elephants	No riding, other visitor activities unknown
Thailand	Kindred Spirit Elephant Sanctuary	No riding, no washing, observation
Thailand	Phuket Elephant Sanctuary	No riding, no washing, observation
Thailand	Siam Niamrit	Show

* as identified through flyer/brochure or TripAdvisor photographs and comments

Appendix 3

Scoresheet used for the elephant venue assessments.

Category/Score	0	1	2	3	4
Mobility	Short chains + trekking	Long chain/ Small pen (< 20m ²) + trekking	Pen 20-200m ² + trekking	Enclosure 201 - 2,000 sqm day+night or unrestricted movement or >2,000m ² during day but limited mobility at night	Free and unrestricted movement or enclosure > 2,000m ² day and night
Hygiene	Old faeces + urine present, moist surface, stench, no access to pool/shower	Old faeces + urine present, some drainage, showering, no baths	Only recent faeces + urine, dry ground, short baths	Clean and dry surface, regular baths	Clean and dry surface, free choice of clean water, baths and dust/ mud baths
Environmental noise quality	Direct vicinity to traffic, loud speaker, large crowds	Intermediate of 0 and 2	Occasional traffic or small visitor groups, no electronic noise	Intermediate of 2 and 4	No noise except natural sounds
Daytime rest area	Concrete ground, unavoidable exposure to sunlight/rain	Intermediate of 0 and 2	Dirt ground with medium shelter possibility (eg; single tree)	Intermediate of 2 and 4	Natural ground with sufficient and adequate shelter options
Naturalness	Urban or fully artificial environment with no resemblance of natural habitat at all	Intermediate of 0 and 2	Natural environment surroundings but immediate vicinity only artificial structures	Intermediate of 2 and 4	Fully based in natural environment
Social interaction	Solitary – no visual contact with conspecifics	Visual but no tactile contact	Tactile contact but no social grouping	Small social grouping possible	Possibility of free interaction with creation of social network
Diet quality	Inadequate amounts (<75kg/1000kg body weight) and limited variety	Adequate amounts but limited variety and quality, only cultivated foods	Adequate amounts, pre-selected good variety and quality, mostly cultivated, always food available, not free water access	Adequate amounts, pre-selected cultivated and natural foods, ad-libitum water and food	Sufficient natural food sources to select from, free choice of consumption
Entertainment intensity / Visitor interaction	Show, riding or intense use for other purposes	No shows, but regularly rides	No rides but strong visitor interaction with involuntary elephant participation (eg; Be-a-mahout, washing)	No entertainment and only visitor interaction with voluntary elephant participation	No entertainment and no direct interaction with visitors
Animal management	No welfare understanding, inappropriate usage of ankhus, visible wounds on elephants, elephants constantly saddled, no vet treatments	Minimum welfare understanding, strong use of ankhus, treatment only by annual or bi-annual vet visits, elephants constantly saddled	Moderate welfare understanding, use of ankhus restricted only to required situations, call or transport to vet, no saddle unless ready to ride	Intermediate of 2 and 4	Very strong welfare understanding and focus on best situation for elephants, use of positive reinforcement training where feasible, resident vet or strong vet support

References

1. Moorhouse, T.P.; Dahlsjö, C.A.; Baker, S.E.; D’Cruze, N.C.; Macdonald, D.W. (2015) The customer isn’t always right: conservation and animal welfare implications of the increasing demand for wildlife tourism, *PloS One* 10: e0138939.
2. World Animal Protection (2016) Checking Out of Cruelty: How to end wildlife tourism’s holiday horrors, World Animal Protection. Available: http://www.worldanimalprotection.org/sites/default/files/int_files/pdfs/checking_out_of_cruelty.pdf
3. World Animal Protection (2010) Wildlife on a tightrope: an overview of wild animals in entertainment in Thailand. World Animal Protection. Available: http://www.worldanimalprotection.org/sites/default/files/int_files/wildlife-on-a-tightrope-thailand.pdf
4. Higginbottom, K. (2004) Wildlife tourism, *Altona Common Ground*. Available: <http://www.academia.edu/download/42786618/wildlifetourism-impacts.pdf>
5. UNWTO (2016) UNWTO tourism highlights. UNWTO.
6. Schmidt-Burbach, J.; Ronfot, D.; Srisangiam, R. (2015) Asian elephant (*Elephas maximus*), pig-tailed macaque (*Macaca nemestrina*) and tiger (*Panthera tigris*) populations at tourism venues in Thailand and aspects of their welfare, *PloS One* 10: e0139092.
7. Fernando, P.; Pastorini, J. (2011) Range-wide status of Asian elephants, *Gajah* 35: 15–20.
8. Sukumar, R. (2006) A brief review of the status, distribution and biology of wild Asian elephants *Elephas maximus*, *Int Zoo Yearb.* 40: 1–8.
9. IUCN (2008) *Elephas Maximus*. In: The IUCN Red List of Threatened Species. Available: <http://www.iucnredlist.org/details/7140/0>
10. Nijman, V. (2014) An Assessment of the Live Elephant Trade in Thailand. TRAFFIC International, Cambridge.
11. Anon. (2015) 2015 to be a zero poaching year for elephants in KuiBuri National Park. In: WWF Thailand. Available: <http://www.wwf.or.th/en/?255875/2015-to-be-a-zero-poaching-year-for-elephants-in-KuiBuri-National-Park>
12. Leimgruber, P.; Senior, B.; Aung, M.; Songer, M.A.; Mueller, T.; Wemmer, C.; et al. (2008) Modeling population viability of captive elephants in Myanmar (Burma): implications for wild populations. *Anim Conserv.* 11: 198–205.
13. Varma, S. (2015) Captive Elephants in India: ecology, management and welfare. Compassion Unlimited Plus Action (CUPA) and Asian Nature Conservation Foundation, Bangalore, India.
14. Sukumar R. (2003) *The Living Elephants: evolutionary ecology, behaviour, and conservation*. Oxford University Press. Available: https://www.google.com/books?hl=en&lr=&id=P_IS80OBWTgC&oi=fnd&pg=PA3&dq=The++living++elephants:+evolutionary++ecology,+behavior,+and+conservation&ots=VT27F7Q94Z&sig=jLc2ewYFlwGazy6-oScQeUjqQ_M
15. Clubb, R.; Rowcliffe, M.; Lee, P.; Mar, K.U.; Moss, C.; Mason, G.J. (2008) Compromised survivorship in zoo elephants, *Science* 322: 1649–1649.
16. Pradhan, N.M.B.; Williams, C.; Dhakal, M. (2011) Current status of Asian elephants in Nepal, *Gajah* 35: 87–92.
17. de Silva, S.; Schmid, V.; Wittemyer, G. (2016) Fission–fusion processes weaken dominance networks of female Asian elephants in a productive habitat, *Behav Ecol. arw* 153. doi:10.1093/beheco/arw153
18. McKay, G.M. (1973) *Behavior and ecology of the Asiatic elephant in southeastern Ceylon*. Smithsonian Institution Press Washington, DC. Available: <http://indianmedicine.eldoc.ub.rug.nl/root/M/66526/>
19. Bradshaw, G.A.; Lindner, L. (2009) Post-traumatic Stress and Elephants in Captivity. Available: <https://pdfs.semanticscholar.org/b5b9/4307d6f45747f4ccfb82dc5a69df71d02658.pdf>
20. Bradshaw, G.A.; Schore, A.N.; Brown, J.L.; Poole, J.H.; Moss, C.J. (2005) Elephant breakdown, *Nature* 433: 807. doi:10.1038/433807a
21. Rizzolo, J.B.; Bradshaw, G.A. (2016) Prevalence and patterns of complex PTSD in Asian elephants (*Elephas maximus*). Centre for Asian Studies, University of Kelaniya; Kelaniya, Sri Lanka, pp. 291–297.
22. Zeder, M.A.; Emshwiller, E.; Smith, B.D.; Bradley, D.G. (2006) Documenting domestication: the intersection of genetics and archaeology. *Trends Genet.* 22: 139–155. doi:10.1016/j.tig.2006.01.007
23. Price, E.O. (1984) Behavioral aspects of animal domestication. *Q Rev Biol.* 1–32.
24. Russell, N. (2002) The wild side of animal domestication. *Soc Anim.* 10: 285–302 doi:10.1163/156853002320770083
25. Koehl, D. (2010) *Elephants encyclopedia*, Elephants.se. Available: www.elephant.se
26. Roots C. (2007) *Domestication*. Greenwood Press.
27. Lair, R. (1997) *Gone Astray: the care and management of the Asian elephant in domesticity*. FAO. Available: <http://www.fao.org/docrep/005/AC774E/AC774E00.HTM>
28. Mahouts Elephant Foundation (2015) *Tourism cares: creating awareness and respect for elephants*. Available: www.mahouts.co.uk/image/data/blog/tourismcares.pdf
29. Elephant Experts (2014) *Optimized training and management*. In: *Elephant Experts*. [cited 12 Aug 2016]. Available: www.elephantexperts.org/optimized.html
30. Elephant Nature Park (2016) *The importance of positive reinforcement*. In: *Elephant Nature Park* [cited 5 Jun 2016]. Available: <http://www.elephantnaturepark.org/the-importance-of-positive-reinforcement/>
31. Story, E.; Story, J. (2015) *Golden Triangle Asian Elephant Foundation veterinary training programs*. In: *The Elephant Story* [cited 5 Apr 2016]. Available: <http://the-elephant-story.com/blogs/news/79459844-gold-en-triangle-asian-elephant-foundation-veterinarian-training-programs>
32. Buckley, C. (2016) *Mahout and elephant training initiative (METI)*. In: *Elephant Aid International* [cited 5 Dec 2016]. Available: <http://www.elephantaidinternational.org/projectsDetail.php?recordID=2>

33. Xinhua (2011.) Swiss tourist killed by elephant in Thailand, China Daily. Available: http://www.china-daily.com.cn/world/2011-02/24/content_12074833.htm
34. Anon. (2009) Rogue elephant gores toddler at Pattaya floating market, Pattaya Daily News. Pattaya; 24 Oct 2009.
35. Anon. (2008) Elephant stomps woman outside Pattaya restaurant, Pattaya Daily News. Pattaya; 3 Oct 2008.
36. Anon. (2000) Family mourns Thai elephant victim, BBC News. Available: http://news.bbc.co.uk/2/hi/uk_news/755243.stm
37. Anon. (2016) Scottish tourist "killed by an elephant", BBC News. Scotland; 2 Feb 2016.
38. Douglas-Hamilton, I.; Barnes, R.F.W.; Shoshani, H.; Williams, A.C.; Johnsingh, A.J.T.; Beck, R. et al. (2001) Elephants. In: The new Encyclopedia of Mammals. Oxford University Press, pp. 436–445.
39. Iyashchenko, K.P.; Greenwald, R.; Esfandiari, J.; Olsen, J.H.; Ball, R.; Dumonceaux, G., et al. (2006) Tuberculosis in elephants: antibody responses to defined antigens of *Mycobacterium tuberculosis*, potential for early diagnosis, and monitoring of treatment, *Clin Vaccine Immunol.* 13: 722–732. doi:10.1128/CVI.00133-06
40. Angkawanish, T.; Boonprasert, K.; Homkong, P.; Sombutputorn, P.; Mahasawangkul, S.; Jansittiwate, S.; et al. (2009) Elephant health status in Thailand: the role of mobile elephant clinic and elephant hospital, *Recent Publ Asian Elephants 50 News Briefs* 61: 15.
41. DNPWC (2011) Nepal Elephant Tuberculosis Control and Management Action Plan (2011-2015). Government of Nepal, Ministry of Forests and Soil Conservation, Department of National Parks and Wildlife Conservation. Available: <http://www.ntnc.org.np/sites/default/files/publications/Nepal%20Elephant%20TB%20Control%20and%20Mgt%20Action%20Plan.pdf>
42. Mikota, S.K.; Peddie, L.; Peddie, J.; Isaza, R.; Dunker, F.; West, G. et al. (2001) Epidemiology and diagnosis of *Mycobacterium tuberculosis* in captive Asian elephants (*Elephas maximus*). *J Zoo Wildl Med.* 32: 1–16.
43. Michalak, K.; Austin, C.; Diesel, S.; Bacon, M.J.; Zimmerman, P.; Maslow, J.N. (1998) *Mycobacterium tuberculosis* infection as a zoonotic disease: transmission between humans and elephants. *Emerg Infect Dis.* 4: 283.
44. Ong, B.L.; Ngeow, Y.F.; Razak, M.F.A.A.; Yakubu, Y., Zakaria, Z.; Mutalib, A.R. et al. (2016) Tuberculosis in captive Asian elephants (*Elephas maximus*) in Peninsular Malaysia. *Epidemiol Infect.* 141: 1481–1487. doi:10.1017/S0950268813000265
45. Veasey, J. (2006) Concepts in the care and welfare of captive elephants. *Int Zoo Yearb.* 40: 63–79. doi:10.1111/j.1748-1090.2006.00063.x
46. de Vries, L. (2014) An elephant is not a machine: a survey into the welfare of private captive elephants in Sauraha, Chitwan National Park. *Animal Nepal, Kathmandu.*
47. Magda, S.; Spohn, O.; Angkawanish, T.; Smith, D.A.; Pearl, D.L. (2015) Risk factors for saddle-related skin lesions on elephants used in the tourism industry in Thailand. *BMC Vet Res.* 11: 1.
48. Farm Animal Welfare Council (1979) Five Freedoms. Available: <http://webarchive.nationalarchives.gov.uk/20121007104210/http://www.fawc.org.uk/pdf/fivefreedoms1979.pdf>
49. Biggs, D.; Courchamp, F.; Martin, R.; Possingham, H.P. (2013) Legal trade of Africa's rhino horns, *Science* 339: 1038–1039.
50. Tensen, L. (2016) Under what circumstances can wildlife farming benefit species conservation? *Glob Ecol Conserv.* 6: 286–298.
51. World Animal Protection (2016) Humane Solutions for Elephants in Entertainment: Guidelines, World Animal Protection. Available: www.worldanimalprotection.org/elephant-friendly-venue-guidelines
52. Van de Water, A. (2016) How honeybees help to create harmony between people and elephants. In: Bring the elephant Home. Available: www.bring-the-elephant-home.org
53. Zoological Society London (2015) Thailand Elephant Conservation: mitigating human–elephant conflicts. Zoological Society, London. Available: <http://static.zsl.org/files/zsl-info-sheet-thailand-elephant-conservation-1401.pdf>
54. Laohachaiboon, S. (2010) Conservation for whom? Elephant conservation and elephant conservationists in Thailand. Available: <http://repository.kulib.kyoto-u.ac.jp/dspace/handle/2433/141762>
55. Lohan, R. (2002) Giants on our hands: the elephant situation in Thailand and a plea for co-operation, Proc. Int. Workshop Domesticated Asian Elephant. FAO, Bangkok. Available: <http://www.fao.org/docrep/005/ad031e/ad031e0r.htm#bm27>
56. Kashio, M. (2002) Giants on our hands: opening remarks. FAO Bangkok.
57. Thitaram, C. (2008) Asian elephant. Elephant Research and Education Center, Faculty of Veterinary Medicine, Chaing Mai University. Available: <http://www.asianelephantresearch.com/about-elephant.php>
58. Polyapipat, P.; Loh, A. (2015) Tourists' understanding of the elephant business in the tourism industry: a study of international tourists in Chiang Mai province, Thailand. *ABAC ODI J. Vis. Action Outcome* 2.
59. Pintavongs, W.; Chueplaivej, P.; Boonyasart, B.; Kidyhoo, S.; Pravai, W.; Rattanakunuprakarn, J. et al. (2014) Domestic elephant population structure and health status in Thailand, *J. Kasetsart Vet.* 24: 16–24.
60. Department of Tourism Thailand (2017) Visitor statistics 2550–2559. Department of Tourism Thailand. Available: <http://newdot2.samartmultimedia.com/home/listcontent/11/221/276>
61. World Animal Protection (2016) Elephant-friendly travel companies. World Animal Protection. Available: www.worldanimalprotection.org/elephant-friendly-travel-companies
62. Doak, N. (2014) Polishing off the ivory: surveys of Thailand's ivory market. TRAFFIC International, Cambridge, UK.

63. Hastie, J.; Newman, J.; Rice, M. (2002) Back in Business: elephant poaching and the ivory black markets of Asia. Environmental Investigation Agency, UK.
64. Stiles, D. (2009) The elephant and ivory trade in Thailand. TRAFFIC South East Asia.
65. TRAFFIC (2015) Thailand's drive against illegal ivory trade bolstered by forensic tools. In: TRAFFIC News 23 Feb 2015 [cited 5 Apr 2016]. Available: <http://www.traffic.org/home/2015/2/23/thailands-drive-against-illegal-ivory-trade-bolstered-by-for.html>
66. The Nation (2011) Thai temple butchers carcasses of 3 elephants, sold their meat, Asia One News. Available: <http://news.asiaone.com/News/Latest+News/Asia/Story/A1Story20110107-256876.html>.
67. Leimgruber, P.; Gagnon, J.B.; Wemmer, C.; Kelly, D.S.; Songer, M.A.; Selig, E.R. (2003) Fragmentation of Asia's remaining wildlands: implications for Asian elephant conservation, *Anim Conserv.* 6: 347-359.
68. Fernando, P.; Jayewardene, J.; Prasad, T.; Hendavitharana, W.; Pastorini, J. (2011) Current status of Asian elephants in Sri Lanka, *Gajah* 35: 93-103.
69. Jayewardene, J. (2002) Giants on our hands: the care and management of domesticated Asian elephants in Sri Lanka. Bangkok, p. 43. Available: http://coin.fao.org/coin-static/cmsdia/9/13171049401100/2002_30_high.pdf#page=53
70. Weerarathne, C. (2016) Chief magistrate issues notice on Wildlife DG, CID. The Island, 20 Oct 2016, Sri Lanka. Available: http://www.island.lk/index.php?page_cat=article-details&page=article-details&code_title=154101
71. Trevett, C. (2016) Gift to key elephant in the courtroom. New Zealand Herald, 20 Jul 2016.
72. AFP (2016) Sri Lanka bans use of young elephants for work. In: Phys.Org, 23 Nov 2016 [cited 17 Jan 2017]. Available: <https://phys.org/news/2016-11-sri-lanka-young-elephants.html>
73. Jackson, P.F. (1985) Elephants in Asia. Asian Elephant Specialist Group.
74. Ministry of Environment and Forest of India (2013). Elephant Census 2012. Available: <http://envfor.nic.in/division/introduction-4>
75. Baskaran, N.; Varma, S.; Sar, C.K.; Sukumar, R. (2011) Current status of Asian elephants in India, *Gajah* 35: 47-54.
76. PTI (2016) Don't issue ownership certificates to elephant owners: Supreme Court, New Indian Express. Available: <http://www.newindianexpress.com/nation/Dont-Issue-Ownership-Certificates-to-Elephant-Owners-Supreme-Court/2016/05/08/article3422111.ece>.
77. TNN (2014) No ownership record for deceased elephants, The Times of India. Available: <http://timesofindia.indiatimes.com/home/environment/wild-wacky/No-ownership-record-for-deceased-elephants/article-show/30781769.cms>. Accessed 15 Jun 2016.
78. Nambudirri, S (2016) 427 jumbos in captivity have no ownership records, The Times of India, 4 Dec 2016, City-Kochi. Available: <http://timesofindia.indiatimes.com/city/kochi/427-jumbos-in-captivity-have-no-ownership-records/articleshow/55786248.cms>. Accessed 6 Dec 2016.
79. Central Zoo Authority (2009) Banning elephants from zoo collections. Ministry of Environment and Forests of India. Available: www.cza.nic.in/g18.pdf
80. Rangarajan, M.; Desai, A.; Sukumar, R.; Easa, P.S.; Menon, V.; Vincent, S., et al. (2010) Gajah: securing the future for elephants in India. The Report of the Elephant Task Force India. Available: <http://indianmedicine.eldoc.ub.rug.nl/root/R4/468r/>
81. Singh, V. (2016) Central Zoo Authority: no more wild animals in circuses, says Central Zoo Authority, Times of India, 7 Dec 2016. Available: <http://timesofindia.indiatimes.com/city/mumbai/no-more-wild-animals-in-circuses-says-central-zoo-authority/articleshow/55858347.cms>. Accessed 17 Jan 2017.
82. Wildlife SOS (2015) Elephant Conservation and Care Center. In: Elephant Conservation and Care Center [cited 17 Jan 2017]. Available: <http://wildlifesos.org/elephant-conservation-and-care-center/>
83. TRAFFIC (2015) Sonepur Fair once again on the wrong side of the wildlife law. TRAFFIC Post 22 and 23. Available: http://awsassets.vvfindia.org/downloads/traffic_post__march_2015.pdf
84. Niraj, S.K.; Ghosh, S. (2014) An investigative report on Sonepur Animal (Mela) Fair 2013. TRAFFIC 20. Available: http://awsassets.vvfindia.org/downloads/traffic_post_march_2014.pdf
85. Ministry of Forests and Soil Conservation of Government of Nepal (2003) Domesticated Elephant Management Policy, 2060 (2003). Ministry of Forests and Soil Conservation. Available: http://www.forestrynepal.org/images/publications/GoN_Domesticated_Elephant_Policy.pdf
86. Elephant Aid International (2015) Chain Free Means Pain Free: Nepal. Elephant Aid International. Available: https://elephantaidinternational.org/wp-content/uploads/2016/10/Nepal_CFMFP_2015_report.pdf
87. AFP, (2016) Mammoth battles at Nepal elephant polo championship, Mail Online, 2 Dec 2016. Available: <http://www.dailymail.co.uk/~article-3994126/index.html>. Accessed 17 Jan 2017.
88. Khounboline, K. (2011) Current status of Asian elephants in Lao PDR, *Gajah* 35: 62-66.
89. Norachack, B. (2002) The care and management of domesticated Asian elephants in Lao PDR. Proceedings of the International Workshop on the Domesticated Asian Elephant. FAO, Bangkok.
90. Maltby, M.; Bouchier, G. (2011) Current status of Asian elephants in Cambodia, *Gajah* 35: 36-42.
91. Dany, C.; Weiler, H.; Tong, K.; Han, S. (2002) The status, distribution and management of the domesticated Asian elephant in Cambodia. Proceedings of the International Workshop on the Domesticated Asian Elephant. FAO, Bangkok.
92. Tippasert, P; Baker, I., Kashio, M. (2002) Giants on our Hands: elephants and ecotourism in Thailand. Bangkok, p. 157.
93. Infoplease.com (2016) Country Profile: Burma. In: Infoplease. Available: <http://www.infoplease.com/country/profiles/burma.html>

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